

India

Overweight (no change)

Highlighted Companies

GAIL India

ADD, TP Rs200, Rs180 close

Gas transmission volume is poised to rise, given India's record-high gas usage across sectors, with a significant contribution from CGD & fertilizer sectors. Consolidated EPS is likely to post a 26% CAGR over FY24F-26F. We have an ADD rating on the stock with target price of Rs200.

Gujarat Gas

ADD, TP Rs679, Rs577 close

CGD business was negatively impacted by higher gas as principal commercial customers (Morbi tile manufacturers) have shifted to propane. As LNG costs come down, volume growth will come back. We currently have an ADD rating on the stock with a target price of Rs679.

Indraprastha Gas

ADD, TP Rs539, Rs438 close

Higher APM gas allocation to city gas distribution (CGD) companies presents a favourable scenario and brings potential benefits to the CGD sector. We currently have an ADD rating on the stock with a target price of Rs539.

Summary Valuation Metrics

P/E (x)	Mar24-F	Mar25-F	Mar26-F
GAIL India	11.7	8.66	7.42
Gujarat Gas	22.5	19.67	17.22
Indraprastha Gas	14.3	13.01	11.82

P/BV (x)	Mar24-F	Mar25-F	Mar26-F
GAIL India	1.54	1.39	1.24
Gujarat Gas	4.59	3.77	3.13
Indraprastha Gas	3.12	2.57	2.15

Dividend Yield	Mar24-F	Mar25-F	Mar26-F
GAIL India	2.99%	4.62%	5.39%
Gujarat Gas	0.35%	0.35%	0.35%
Indraprastha Gas	0.82%	0.82%	0.82%

Research Analyst(s)



Satish KUMAR

T (91) 22 4161 1562
E satish.kumar@incredresearch.com

Vipraw SHRIVASTAVA

T (91) 22 4161 1565
E vipraw.srivastava@incredresearch.com

Abbas PUNJANI

T (91) 22 4161 1598
E abbas.punjani@incredresearch.com

Oil & Gas - Retail

Ammonia spreads to remain elevated

- Closed NH₃ plants are not being started due to carbon tax imposition in Europe from 2025. India can be the best supplier to Europe as LNG prices are falling.
- The US is the cheapest producer of ammonia but it's a net importer of ammonia (NH₃). Henry Hub prices will rise as LNG terminals come online.
- Indian companies who are investing in ammonia assets will have the best of times for the next 5-6 years due to 1) cheap LNG, and 2) NH₃ pricing power.

NH₃ spreads over natural gas to remain higher than historical average

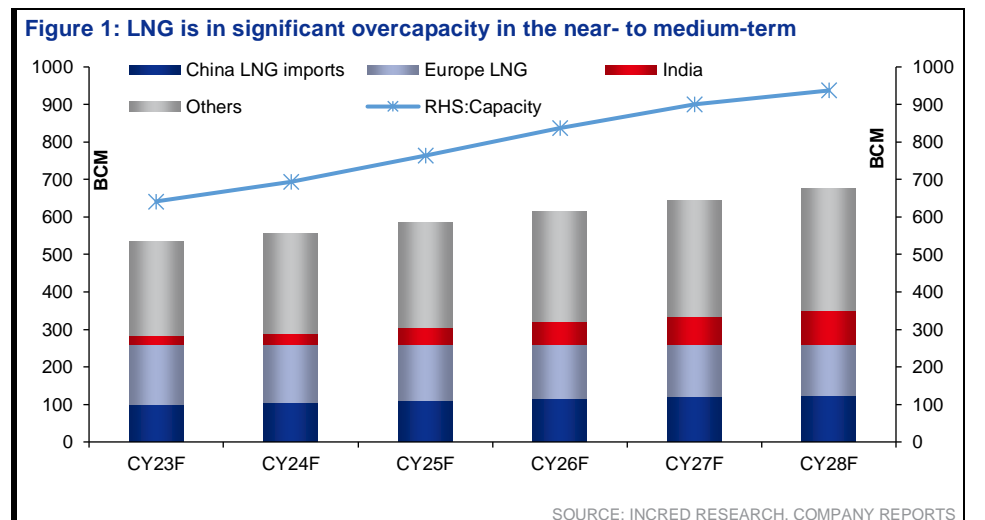
With the fall in natural gas prices, particularly LNG, ammonia prices will come down but its spread over LNG is likely to remain elevated compared to the historical average. Starting 2025, ammonia production in Europe will become increasingly difficult because of carbon tax. However, imports will still be viable till 2030F and for the initial six-year period under CBAM (Carbon Border Adjustment Mechanism). Europe has ~20-22mt of ammonia capacity which would operate at a bare minimum rate from 2025F. We expect ammonia spreads over natural gas and LNG to remain higher than the historical average. The US may have the cost advantage now, but it will face headwinds, such as 1) as the LNG terminal comes online, Henry Hub prices will rise, compressing the margins, 2) the US is still a net importer of ammonia, and 3) like in case of coal mining, the world is too enamoured by green ammonia and so while green ammonia will become viable, in between there is likely to be a squeeze in normal ammonia supply, and hence, spreads will rise.

Globally LNG is in oversupply: US\$7/mmBtu prices are in the offing

As shown in Fig.1, global LNG is in huge oversupply, as 1) European consumption is going down, 2) China is increasingly relying on domestic natural gas as well as pipeline-based imports from Russia and other Asian countries, and 3) the cost of production of LNG in the US is so low that even if Henry Hub prices triple to US\$4.5/mmBtu, then also at US\$7/mmBtu, LNG makers will recover the cash cost of production. All this means that a high slope of 13-14% vis-à-vis crude oil is a thing of the past. The trends are apparent in the recent contract: 1) Petronet has signed a contract with Qatar which appears to be at 10.5-11% slope and the contract has been finalized on a delivered basis (prices are inclusive of freight charges). Deepak Fertilizers also appears to have signed a contract at below US\$10/ mmBtu (supply to start from 2026).

Indian import terminal, pipeline owners and NH₃ makers to benefit

We like gas import terminal operators like Petronet LNG and GAIL (India), which are likely to benefit. While we don't cover fertilizer makers or ammonia plant operators, they will also benefit because of higher gas supply. Indian urea companies will ramp up production, which is good for the country. Lower gas cost can also lead to a lower subsidy bill for the Government of India.



Ammonia spreads to remain elevated

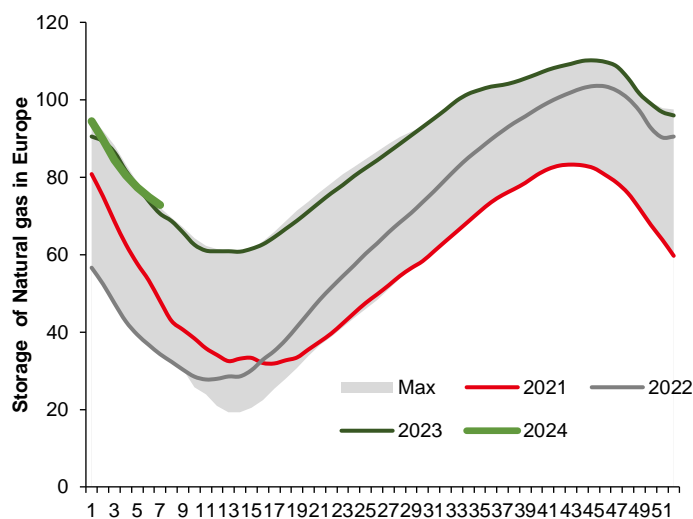
With the fall in natural gas prices, particularly liquefied natural gas or LNG, ammonia prices will also come down but its spread over LNG is likely to remain elevated compared to the historical average. Starting 2025, ammonia production in Europe will become increasingly difficult because of carbon tax. However, imports will still be viable till 2030F and for the initial six-year period under CBAM. Europe has nearly 20-22mt of ammonia capacity which would operate at a bare minimum rate from 2025F. We expect ammonia spreads over natural gas and LNG to remain higher than the historical average.

LNG continues its downward journey

As highlighted in our previous report, LNG continues its downward journey. The pace of decline is surprising, as we had thought that below US\$9/mmBtu, gas will be available only in 2H2024F or 1H2025F. However, import prices in Asia have already fallen to US\$8.6/mmBtu.

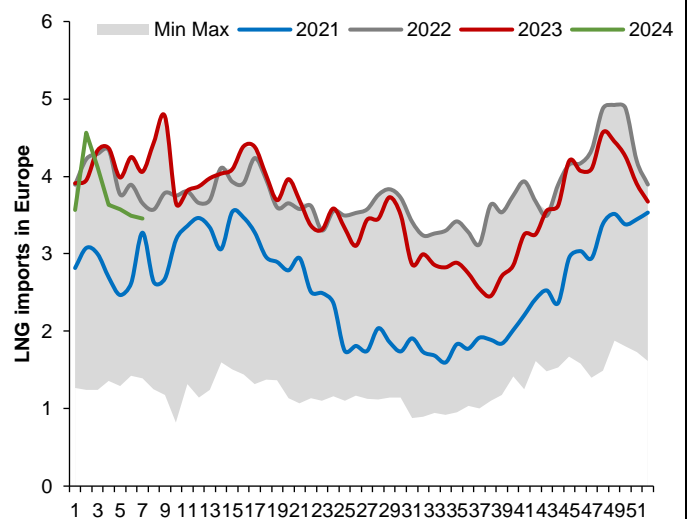
European gas reservoirs at a multi-year high and its LNG imports are down to a three-year low

Figure 2: European gas storage is filled to the highest level



SOURCE: INCRED RESEARCH, COMPANY REPORTS

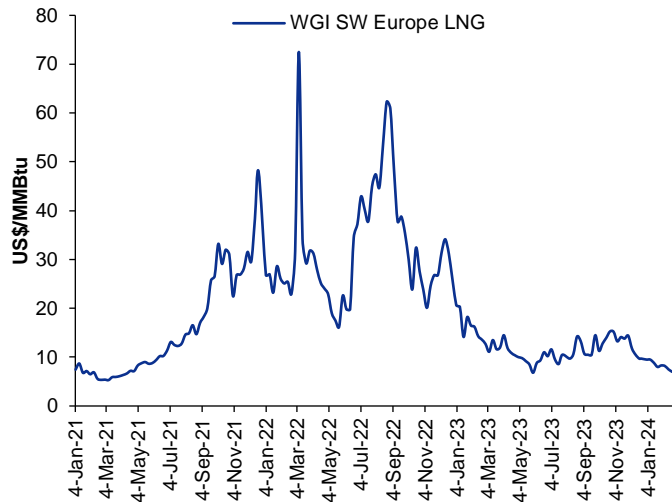
Figure 3: Consequently, LNG imports are down to a three-year low



SOURCE: INCRED RESEARCH, COMPANY REPORTS

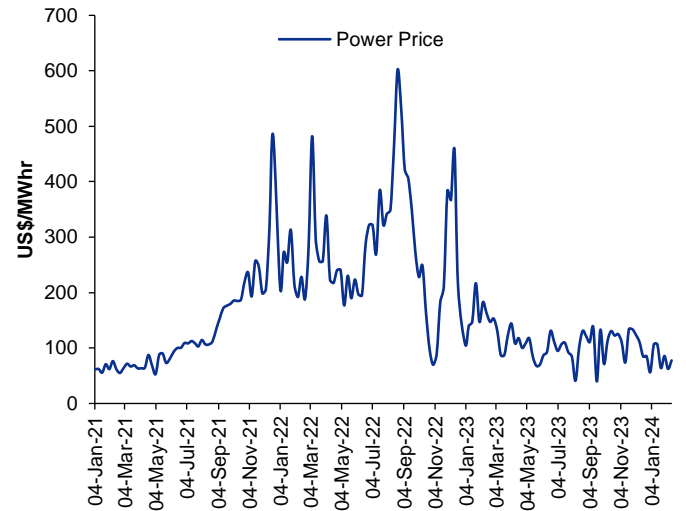
LNG & TTF prices have fallen to multi-month lows in Europe ▶

Figure 4: Consequently, European LNG prices are nearing pre-war lows



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 5: At TTF, power prices are also falling and are at pre-war lows

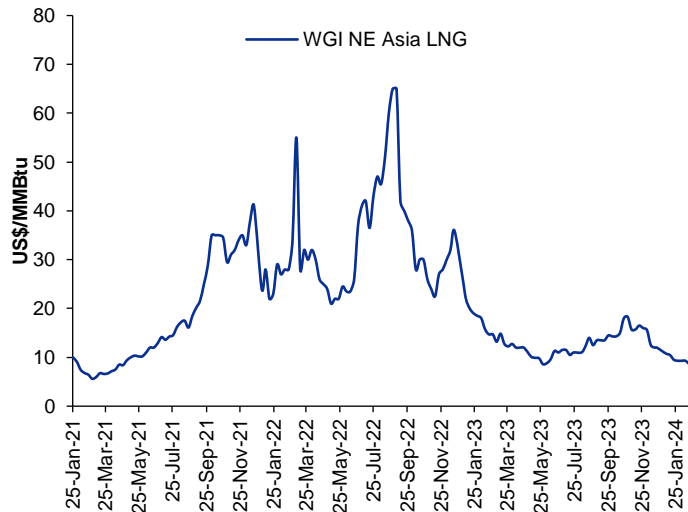


SOURCES: INCRED RESEARCH, COMPANY REPORTS

Consequently, Asian LNG prices have also collapsed ▶

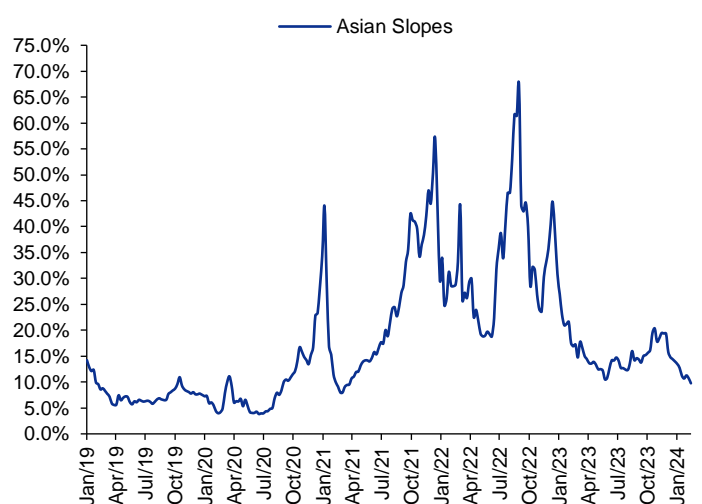
We will not be surprised that new LNG deals in India happen at below 10% slope.

Figure 6: Asian LNG prices are also back to 2021 levels



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 7: More importantly, slope of LNG vis-à-vis crude oil has fallen to below 10%



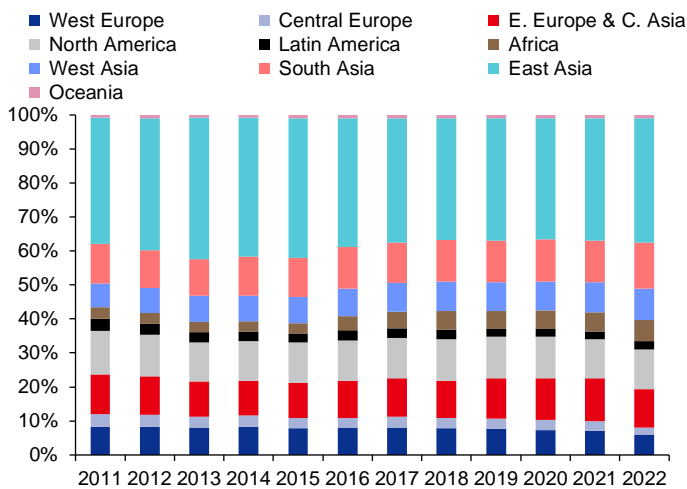
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Global ammonia situation is interesting - policy actions can support prices and higher spreads

Europe has approximately 15% of global ammonia capacity and production stands at ~12mt. However, a new policy regarding emissions will make ammonia production extremely difficult in the region. But under CBAM, Europe can still import the product in a cost-effective manner. After 2030F, even importing ammonia, which is being produced using natural gas (Gray ammonia), will become difficult.

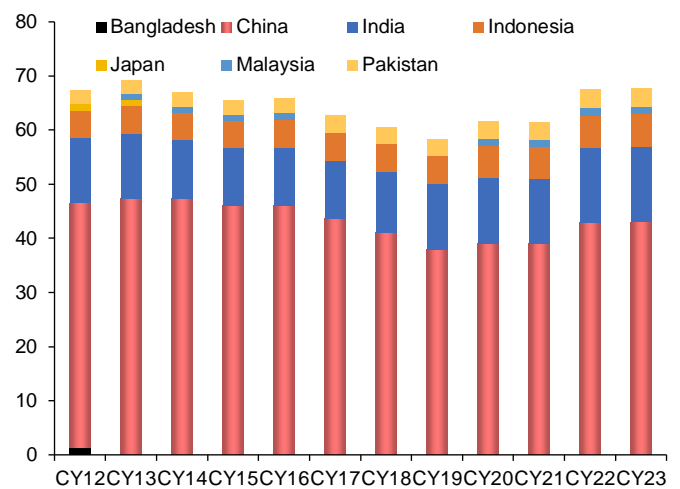
Asia, particularly China, is one of the biggest producers of ammonia

Figure 8: East Asia is the biggest producer of ammonia



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 9: Within Asia, China and India are the largest producers of ammonia



SOURCE: INCRED RESEARCH, COMPANY REPORTS

European ammonia production will face plenty of challenges from the policy front

The EU is determined to reduce CO2 emissions in the coming decades and has embarked on an ambitious decarbonization path. New regulations have been implemented to force emission-intensive sectors, such as the ammonia industry, to decarbonize its production process. Every produced metric tonne of ammonia produces around 2.5 metric tonnes of CO2, which is twice as much as the emission-intensive production of steel. There are three important changes in EU regulations that force the industry to decarbonize - The Renewable Energy Directive (RED III), the phase-out of free EU emissions rights, and the Carbon Border Adjustment Mechanism (CBAM).

Renewable Energy Directive (RED III)

The revised Renewable Energy Directive (RED III) was agreed on in Sep 2023 and contains sector-specific binding sub-targets. RED III requires the hydrogen and fertilizer industry to replace 42% of grey hydrogen with Renewable Fuel of Non-Biological Origin (RFNBO, also referred to as renewable hydrogen or green hydrogen and all its derivatives) by 2030 and even 60% by 2035.

Phasing out free emission allowances

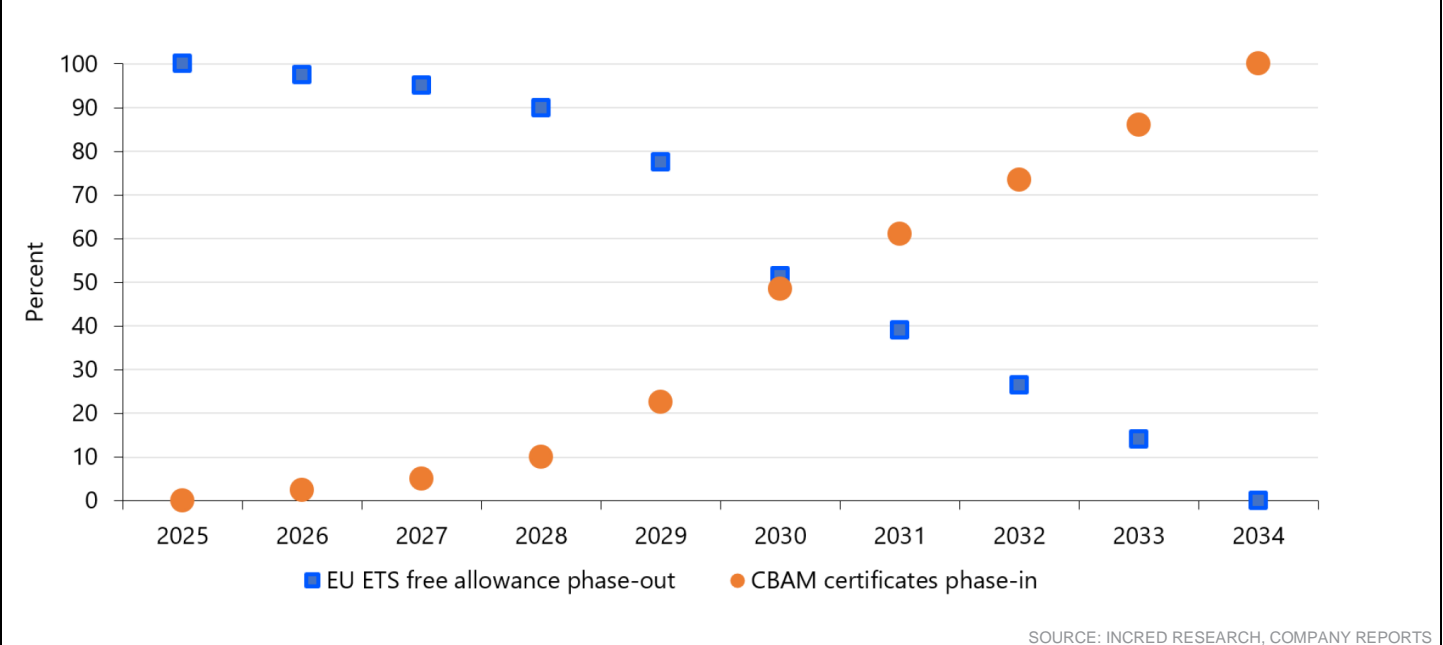
Another major change in the EU regulations that will drive up costs is the gradual phase-out of free carbon allowances (EUAs) under the European Union Emissions Trading System (EU ETS). Currently, the ammonia and fertilizer industry receives free emissions rights. This will change. From 2025, the free emissions rights will be gradually phased out. From 2034, the ammonia and fertilizer industry will have to pay for all its emissions. For the emission-intensive ammonia and fertilizer industry, this is another major cost increase, further eroding its cost competitiveness. However, a part of the effect of this cost increase should be neutralized by the Carbon Border Adjustment Mechanism (CBAM), a third relevant piece of EU legislation.

The Carbon Border Adjustment Mechanism

The Carbon Border Adjustment Mechanism (CBAM) is a levy on carbon-intensive goods entering the EU. The price of the CBAM certificates will reflect the EU ETS prices corrected for any free allowances that EU producers still receive, and carbon costs incurred during the production process in the producing country. In a nutshell, the CBAM aims to mitigate possibly unfair competition from the

hydrogen and fertilizer industry outside the EU that doesn't face any carbon-related regulations. The phase-in of the CBAM mirrors the phase-out of free EUAs.

Figure 10: The way ETS free allowance is being phased out, it will become increasingly impossible to operate an ammonia plant in the EU



There are multiple plants being mothballed in Europe as the future looks highly uncertain ➤

1. As of Apr 2023, Europe's largest ammonia producer, Yara, has curtailed 58% of its European capacity, or 2.8mt per year. Yara is not planning to restart this plant, as because of European emission curtailment schemes.
2. CF Industries has stopped ammonia production at its remaining UK plant. This plant has a capacity of 0.625mt.
3. Nitrogenmuvék Zrt., Hungary's sole producer, stopped output in early Aug 20 23. This plant has a capacity of 0.5mt.

Going ahead, the situation can be critical, and it will be better for Europe to import ammonia from outside, using the CBAM quota. Importing ammonia will reduce the risks considerably for ammonia users as well as producers.

In essence, 20-22mt ammonia production in Europe is at risk ➤

Producing ammonia in Europe has multiple risks:

1. Policy risks - For example, Nitrogenmuvék Zrt had to face retrospective carbon tax, which can lead to its rating downgrade.
2. Carbon costs
3. High labour costs
4. Gas price risk, which is inherent for all ammonia producers.

Hence, its makes sense for India and other regions to become the centres for ammonia production so as to cater to European demand ➤

As we have shown in our earlier report, that globally there is going to be oversupply of LNG ([IN: Oil & Gas - Retail - LNG is falling - Indian demand to rebound](#)) and hence, India and other gas-starved countries can become a cheap source of ammonia for the Western world.

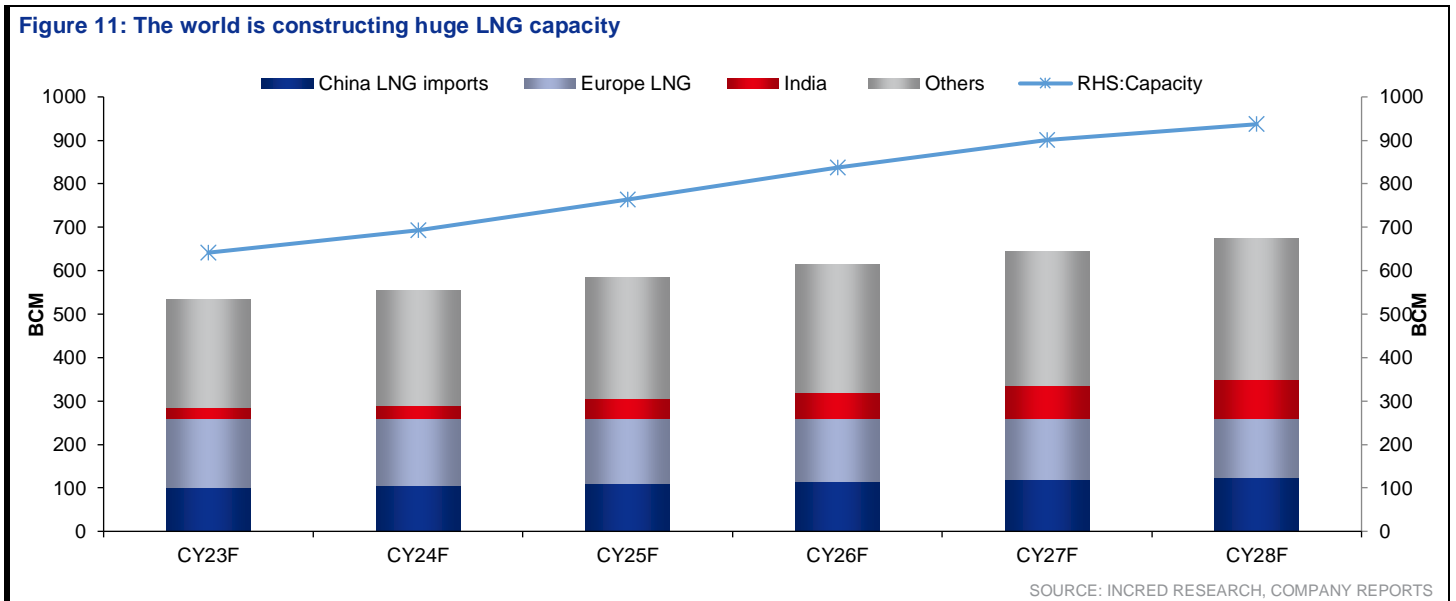
Multiple Indian companies are incurring capex and employing the latest technology to make NH₃ ➤

Here are some of the key current ammonia projects in India:

1. **Greenko's green ammonia project (Andhra Pradesh):** This 1mtpa project is being developed in two phases. The first phase is expected to be operational by 2025F.
2. **ReNew Power's green ammonia project (Andhra Pradesh):** This 1mtpa project is expected to be operational by 2025F.
3. **Indian Oil Corporation's green hydrogen and ammonia project:** This project aims to produce 1mtpa of green ammonia by 2027F.
4. **Fertilizer Corporation of India's (FCI) expansion projects:** FCI is expanding its existing ammonia production capacity by 2.5mtpa.
5. Fertilizer Corporation of India (FCI).
6. **Tata Chemicals' expansion projects:** Tata Chemicals is expanding its existing ammonia production capacity by 1.2mtpa.
7. **PCL Industries' project:** Deepak Fertilizer's step-down 100% subsidiary has commissioned its 500kt ammonia project. This project will use LNG to make ammonia.

What is key for Indian companies is the use of latest energy-efficient method of producing ammonia so that they can be cost-competitive in the global arena. In this regard, companies are doing a good job. The recently commissioned plant of Performance Chemiserve uses the KBR Purifier process to make ammonia. Please note that against the traditional ammonia plant's consumption of 31-32 mmBtu/t of NH₃, this plant only consumes around ~26.5mmBtu/t of NH₃.

Globally, LNG will be in huge oversupply



The penchant for green ammonia is so high that we are not constructing enough normal ammonia plants

The whole world is after green ammonia, which is a good thing to do, but not investing in new traditional ammonia plants is fraught with danger. The global demand for ammonia will only increase from here on.

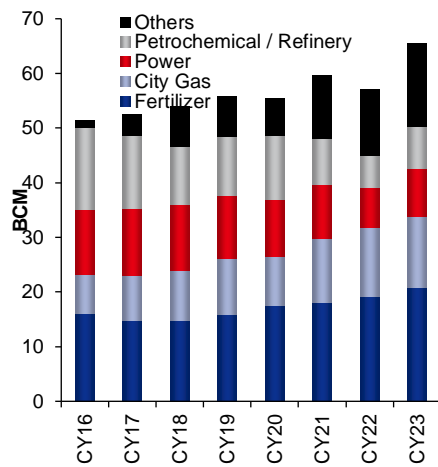
India can potentially become an ammonia manufacturing centre of the world

While the world is going towards the green ammonia route, shunning the traditional ammonia route is not the answer. It will only create price inflation in the near term (as we have seen in coking-coal and other energy sources).

In India, ammonia production is primarily dependent on imported natural gas

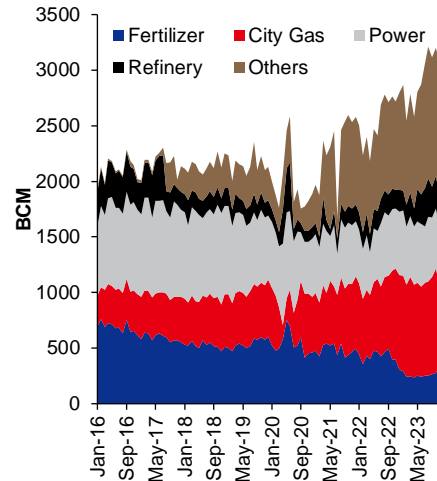
While India produces ~29bcm of natural gas, most of this gas goes to consumer-facing industries like compressed natural gas or CNG, piped natural gas or PNG, industrial usage and for power generation companies.

Figure 12: Total gas consumption in India stood at 65bcm in CY23



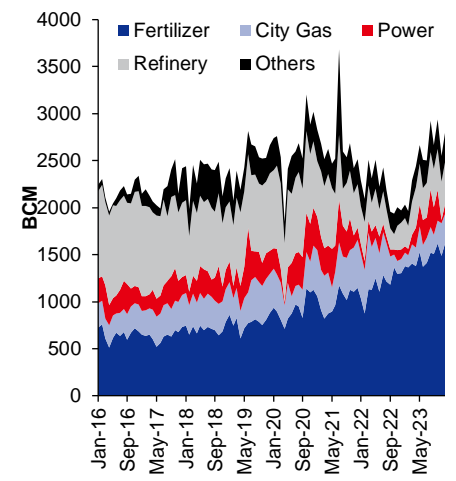
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 13: Urea (ammonia) is not the primary usage source of domestic gas



SOURCE: INCRED RESEARCH, COMPANY REPORTS

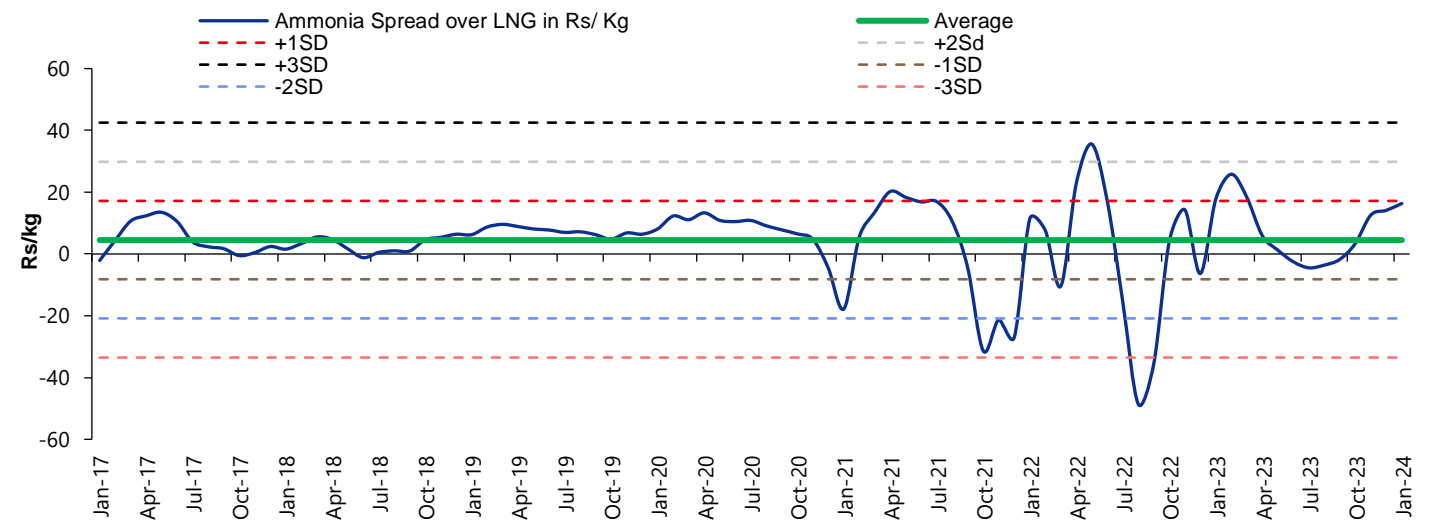
Figure 14: Imported LNG is mainly used to produce fertilizers



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Ammonia spreads over LNG are back to the average level in India

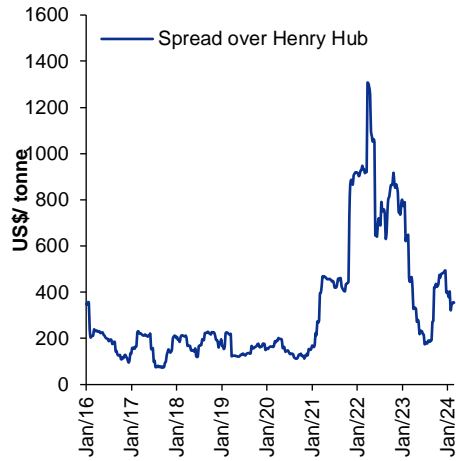
Figure 15: Indian ammonia (CFR India+5% duty) spreads are back to their historical level, which bode well for India's ammonia makers



SOURCE: INCRED RESEARCH, COMPANY REPORTS

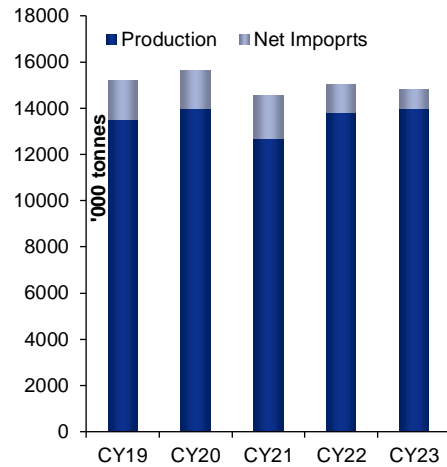
The US can make cheapest ammonia in the world but faces capacity constraints and, in any case as LNG terminals come online, gas prices will at least become 2x ➤

Figure 16: US ammonia makers' spreads over Henry Hub are the highest in the world



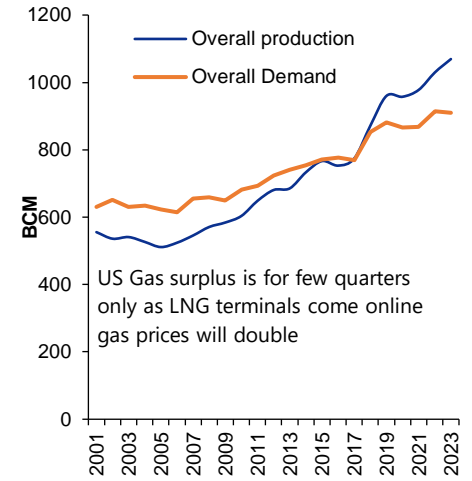
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 17: However, the US constrained by capacity, as it's a net importer



SOURCE: INCRED RESEARCH, COMPANY REPORTS

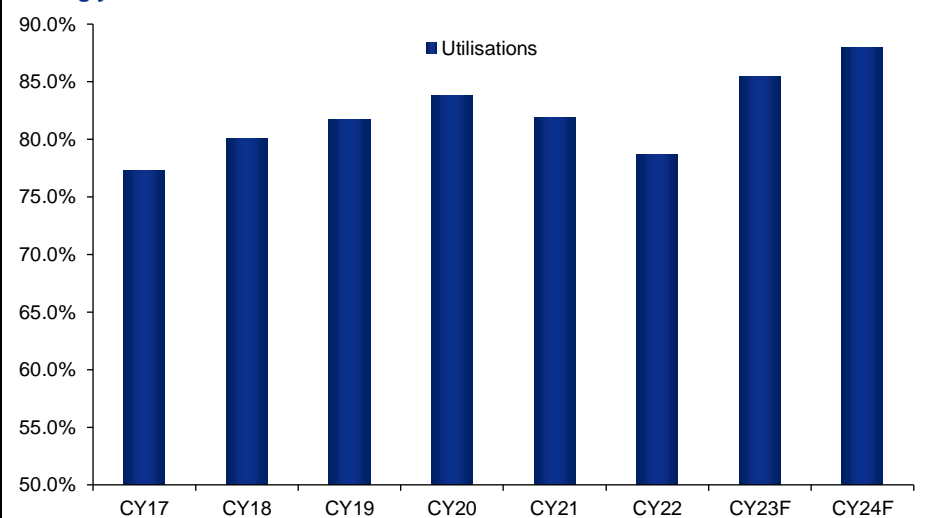
Figure 18: In any case, as LNG capacity rises, surplus gas will come down, thereby pushing ammonia up



SOURCE: INCRED RESEARCH, COMPANY REPORTS

As the world rushes towards green ammonia, traditional ammonia capacity can be in shortage and utilization to touch 90% by CY24F ➤

Figure 19: Capacity utilization of a traditional ammonia plant will touch 90% in the coming years



SOURCE: INCRED RESEARCH, COMPANY REPORTS

However, India's ammonia makers will be in the best spot for five-to-six years ➤

India's ammonia makers will be in the best spot for five-to-six years, in our view, due to the following reasons:

1. LNG prices will go down because of massive capacity addition in LNG terminals.
2. We have sufficient re-gas capacity to import gas (total capacity 93bn cu m).
3. As the world is obsessed with green ammonia and Europe is imposing carbon tax, ammonia capacities are being mothballed.

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