Oil & Gas - Overall

LNG pricing winter may not last for long

- As German demand recovers (Germany to commission multiple import facilities in 2023F) and there is a moderate rise in Chinese demand (last year LNG imports fell 19%), LNG demand to increase by 40bcm YoY in CY23F.
- Effective global liquefaction capacity is likely to be ~601bcm in CY23F, which means that throughout the year all these facilities need to operate at 97% of their capacity. This is a difficult feat as some of the plants will have to go for a mandatory shutdown and weather-related problems can also play spoilsport.
- The propensity to hoard LNG will increase in the coming weeks as gas storage levels (after the peak winter season) will become clearer to the European regulators. We expect LNG price to rise which is negative for CGD companies.

India

Underweight *(no change)*

Highlighted Companies

Mahanagar Gas

REDUCE, TP Rs642, Rs901 close

Consensus earnings estimates are too high and need a massive cut (>30%). We retain our REDUCE rating on the stock with a target price of Rs642.

Indraprastha Gas

REDUCE, TP Rs277, Rs442 close

Over the last 12 years, the stock has, on an average, traded at 17.6x one-year forward EPS. Compared to oil marketing companies or OMCs, Indian CGD companies trade at a valuation of 9x P/BV.

Gujarat Gas

REDUCE, TP Rs410, Rs480 close

Rising APM gas prices and continued scarcity of LNG keeping its prices around US$50/mmBtu are the key headwinds for the CGD segment. Consensus earnings are in for disappointment as either the gross profit will decline, or volume growth will disappoint. Gujarat Gas is our top REDUCE-rated stock.

Summary Valuation Metrics

P/E (x)	Mar22-A	Mar23-F	Mar24-F
Mahanagar Gas	17.71	16.83	16.85
Indraprastha Gas	22.97	28.09	26.55
Gujarat Gas	30.38	30.54	27.05
P/BV (x)	**Mar22-A**	**Mar23-F**	**Mar24-F**
Mahanagar Gas	2.38	2.09	1.86
Indraprastha Gas	4.17	3.74	3.37
Gujarat Gas	6.05	5.16	4.41
Dividend Yield	**Mar22-A**	**Mar23-F**	**Mar24-F**
Mahanagar Gas	3.66%	1.11%	1.11%
Indraprastha Gas	0.81%	0.81%	0.81%
Gujarat Gas	0.42%	0.42%	0.42%

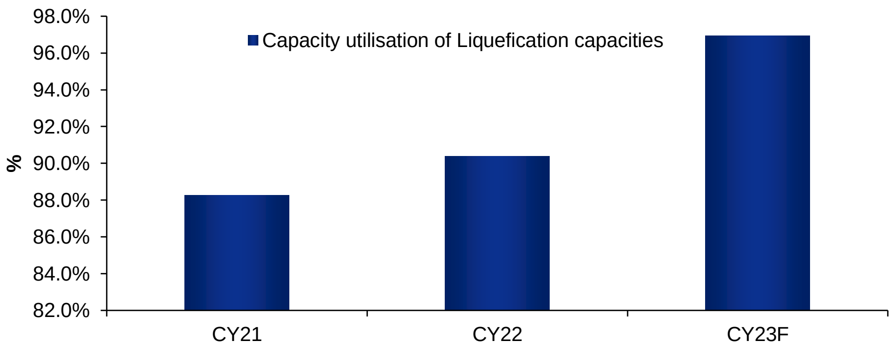
Mild European winter led to LNG price decline, but won't last for long

The European winter has been unusually warm this year which led to a YoY fall in the demand for imported gas. This led to a belief that gas prices are going down structurally. However, this is a temporary reprieve, and the likely increase in European and Chinese gas demand in the coming months will lead to a rise in LNG prices. Please note that in CY22, Germany had to starve its industry for gas as most of the German gas demand was directly met by Russia and the country didn't have alternate means to meet the demand (as it lacked regasification terminals). Germany has made some great progress in this area and in 2023F itself it will commission 18bcm new regassification capacity. In fact, Germany has already commissioned a new regasification (regas) capacity in Brunsbuttel. With the commissioning of regas capacity and €200bn energy subsidy being granted to common citizens as well as industries, German demand is bound to bounce back in the coming weeks. A mild demand recovery in China will lead to an increase in LNG imports by 10bcm. Overall, we expect 40bcm more LNG demand vis-à-vis CY22, which means LNG liquefaction units need to run at 97% of their capacity throughout the year, a feat which is very difficult to achieve at a global level (as there can be mandatory shutdowns, weather related disruptions, etc.) Risk managers at all utilities would like to keep their gas storage full and hence, we feel a demand squeeze-led price rise in on the cards.

LNG prices close to bottom, but we don't know how high they can go

One can use economic analysis to guess peak prices when free money is not a party in equilibrium calculations (i.e., market forces work without any government intervention). However, as of now, multiple governments are doling out huge energy subsidies which make it impossible for demand contraction to balance the market. We don't know how much higher the prices can go, and even the announced government subsidies will not be the final numbers as they keep on increasing it. It's bad times for emerging market economies like India and even worse for frontier markets like Pakistan and Bangladesh. In the Indian context, we feel all city gas distribution or CGD companies may face headwinds when it comes to volume growth.

Figure 1: Global liquefaction capacity utilization needs to rise to 97% in CY23F, a difficult thing to achieve throughout the year hence, shortage is inevitable.



SOURCE: INCRED RESEARCH, COMPANY REPORTS

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LNG pricing winter may not last for long

The fall in LNG prices during the winter season has given a false belief to the investor community that all is fine, and they are unlikely to see CY22 prices again. To some extent, the street belief may be true, that is we may not see US$70/mmBtu LNG prices, but the current prices are very close to their interim bottom and soon LNG prices will start the upward Journey.

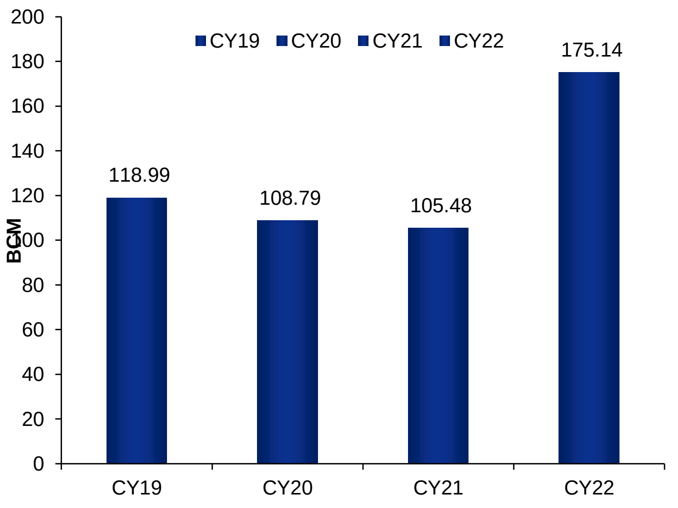
Mild European winter led to a fall in winter LNG demand, but may increase to 200bcm in CY23F

The European winter has been unusually warm this year which led to a YoY fall in the demand for imported gas. This led to a belief that gas prices are going down structurally. However, this is temporary reprieve and gas demand, which is likely to increase in the coming months, will lead to a rise in LNG prices.

European LNG demand skyrocketed to 175bcm in CY22

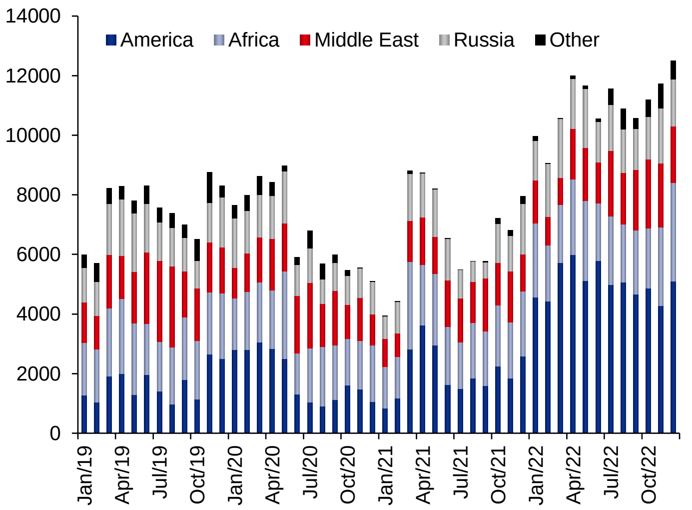
Lack of Russian supply led to a rapid rise in European LNG consumption in CY22. It rose by ~66% to 175bcm in CY22.

Figure 2: European LNG imports increased by 66% in CY22



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 3: During the initial months in CY22, gas imports were sluggish but picked up pace in the latter half of the year



SOURCE: INCRED RESEARCH, COMPANY REPORTS

During CY22, Europe also felt the need for more regasification capacity and the same is coming in thick and fast

A major portion of German gas demand was directly met by Russia and the country didn't have the alternate means to meet the demand (as it lacked the regasification terminals). Germany has made some great progress in this area and in 2023F itself it will commission 18bcm new regasification capacity. In fact, it has already commissioned a new regasification capacity in Brunsbuttel.

Figure 4: Europe's regasification units operated close to 100% of their capacity in CY22, and more gas buying stopped probably because of the lack of regas capacity

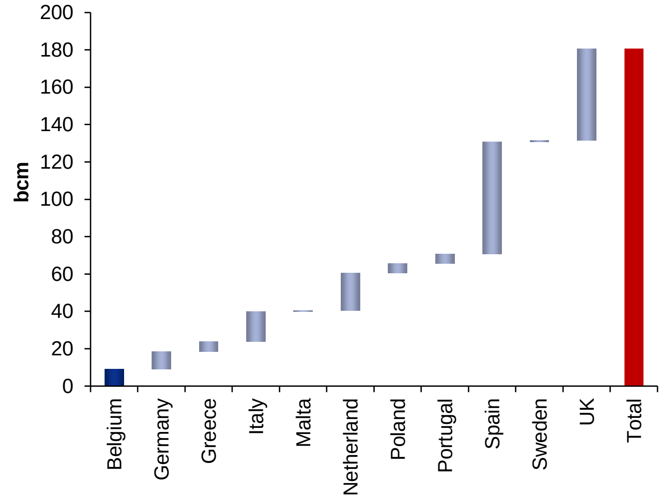


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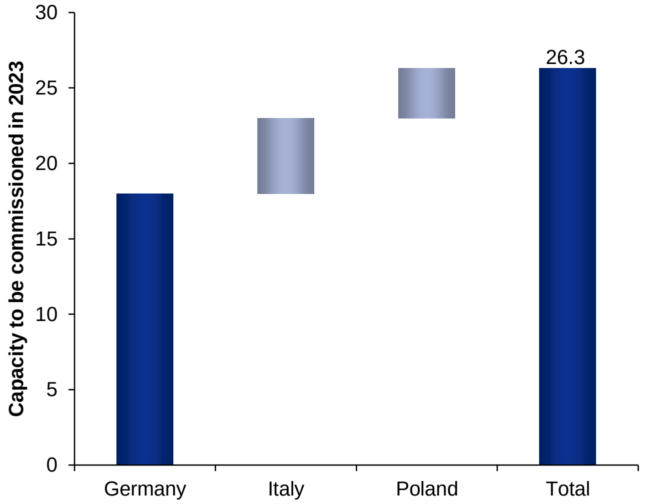
Figure 5: Europe is commissioning new regas capacity at a breakneck speed and in 2023F alone ~27bcm capacity to get commissioned (15bcm in 1QCY23F)



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 6: Details of the regas infrastructure in Europe are shown in this chart

SOURCES: INCRED RESEARCH,

In fact, Germany has done wonders in regas capacity commissioning ➤

1. **Brunsbüttel (commissioning and trial operations) -** Brunsbüttel also hosts one of the five floating terminals leased by the government. They will have a capacity of 5bcm/year (initially only 3.5bcm due to pipeline connection construction) and start operations in early 2023F.

2. **Wilhelmshaven [in operation]-** Capacity of 5bcm/ year.
3. **Wilhelmshaven 2-** Wilhelmshaven is set to host a second floating terminal. The unit with 5bn cubic metres (bcm) capacity is planned to be operational from the third quarter of 2023F.
4. **Lubmin-** Lubmin, the site where the Nord Stream gas pipelines land in Germany, will also host floating terminals. One would be leased by the government (operational from the end of 2023F, at the earliest). It will be operated by RWE and Stena Power. Media reported "many open questions" regarding the plans for the terminal.
5. **Lubmin 2 [in operation]-**capacity of 4.5bcm/year.
6. **Lubmin-3** In the second phase, Deutsche Regas plans to install a second FSRU in Lubmin by Dec 2023F, linked to a new planned offshore pipeline. This capacity is likely to be 7bcm/ year.

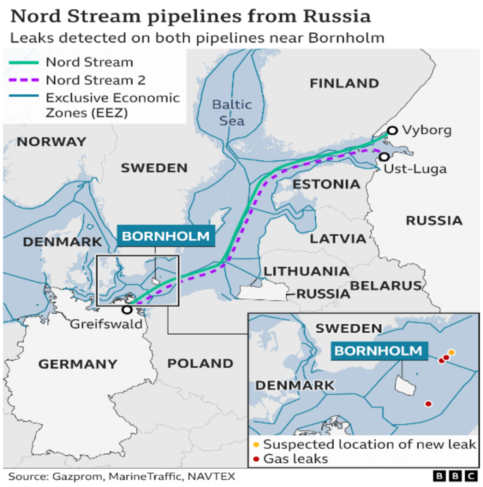
Europe is well-poised to recive 200bcm LNG in CY23F

It appears that Europe's ability to import more LNG was limited by the regasification capacity in CY22. CY23F is likely to be different as 1) in 1H, Europe will have ~195bcm regasification capacity, and 2) by 4QCY23F this capacity should reach 210bcm. It's likely that Europe could import 200bcm of LNG in CY23F.

Germany to become the new destination for LNG cargo, starting Mar 2023F

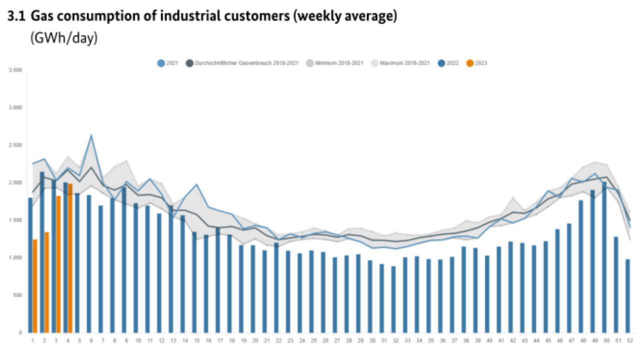
Last year, Germany was at the receiving end of the gas shortage as the ongoing Russia-Ukraine war and Nord Stream-II pipeline blast led to drying up of the 50 bcm/year gas that it used to receive from Russia.

Figure 7: Nord stream pipelines are now closed, which used to be the lifeline of Germany



SOURCE: INCRED RESEARCH, NORD STREAM 1: HOW RUSSIA IS CUTTING GAS SUPPLY TO EUROPE - BBC NEWS

Figure 8: German industrial gas consumption is reviving a bit and as more capacity gets commissioned, it will import more LNG

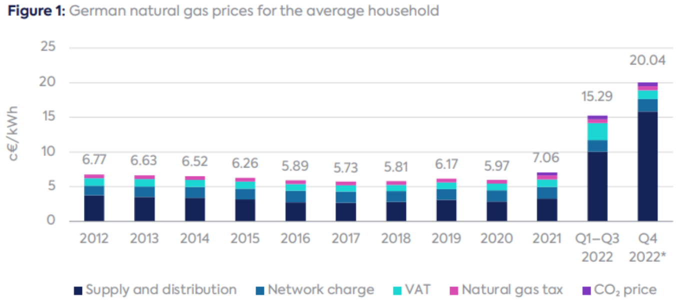


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Energy availability is key for German industry and its national interest

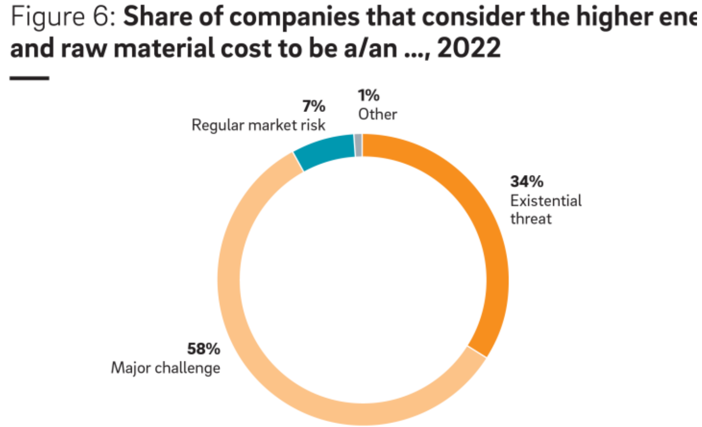
Any shortage of energy is detrimental to Germany's national interest as it will be detrimental to its GDP. Please note that Germany contributes one-third to Europe's manufacturing GVA and is home to multiple chemicals and forging/casting companies.

Figure 9: Energy prices in Germany surged to as high as US$220/MWhr…



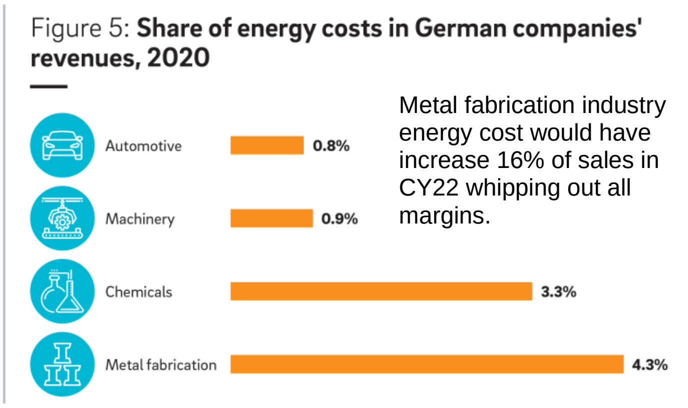
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 10: …without any aid, this was an existential threat to many industries



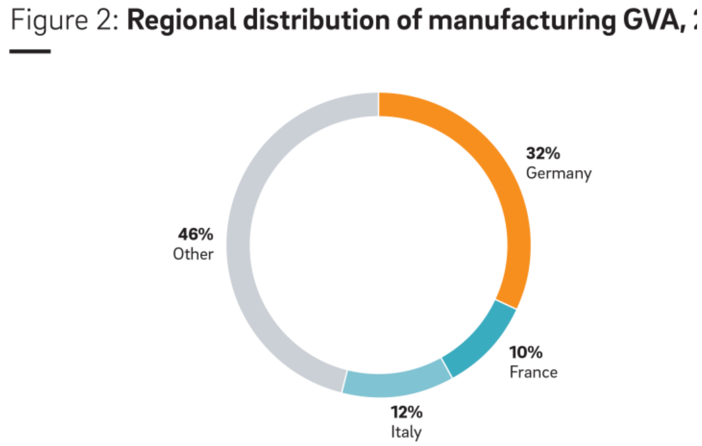
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 11: Energy intensity is particularly high in metal fabrication and chemical industries



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 12: Given the fact that Germany contributes 1/3rd to Europe's manufacturing GVA, it was an existential crisis



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Hence, it's not surprising that Germany has doled out big energy subsidy packages for its industry ➤

Relief for residential and commercial consumers in 2022 (Natural Gas Heat Emergency Aid Act): The German government has paid the monthly gas and district heating bills for these users in Dec 2022. Energy providers did not charge the consumers. Instead, the government paid that month's bills based on the annual gas consumption as of Sep 2022, but adjusted for the Dec 2022 gas price. For a single-family home, this was estimated to reduce the family's annual gas cost by 8 percent (€350) based on Verivox data.

Cap on gas prices (the Gaspreisbremse):

1. The policy puts a price cap of 12 c€/kWh on 80 percent of the average gas consumption profile from the previous year for residential and commercial consumers.
2. The policy has been extended until 30 Apr 2024. The difference between the cap and the market price is borne by the government and is paid to the gas supplier.
3. For anything above 80 percent of the previous year's consumption, the consumer pays the relevant and much higher market price in the contract.
4. Industry—around 24,000 to 25,000 companies with a gas consumption above 1.5m kWh/y—will also be given relief with a price cap of 7c€/kWh on 70 percent of their 2021-level gas consumption.

There are strings attached, but ultimately that's good for gas demand as such ›

1. Adhering to the European Union's Temporary Crisis Framework (TCF) adds conditions to help the industrial consumers. The maximum assistance is fixed at €150m per 'undertaking', in line with the limit set by the EU's Temporary Crisis Framework for energy-intensive industries in Annex 1.
2. It is worth noting that the TCF makes a distinction between several categories of companies regarding the aid given to compensate for additional costs due to exceptionally high natural gas and electricity prices; the aid is also proportional to the increase in energy costs, but the aid intensity and the maximum amount depends on the type of the company.
3. To receive the full amount, a company must also have a decrease in its EBITDA in the eligible period by more than 40 percent relative to 2021 or a negative EBITDA without the relief. Moreover, its EBITDA in the eligible period, including the total aid received, must not exceed 70 percent of its EBITDA in 2021.
4. Depending on the level of relief received, companies must also meet domestically mandated conditions intended to support social objectives. For companies to receive more than €2m in relief for electricity, gas, and heating, they must maintain 90 percent of the number of employees on Jan 2023's payroll through Apr 2025.
5. Companies are allowed to reduce their Jan 2023 workforce by up to 50 percent, if 50 percent of the aid received flows toward long-term investment in the areas of energy transition or energy security meeting either the conditions of the EU Temporary Crisis Framework or the framework for the European Parliament's sustainable investments.
6. Finally, if a company receives between €25 and €50m, its management may not receive new bonuses in the coming year.
7. If a company receives more than €50m, neither bonuses nor dividends are permitted.
8. These controversial measures are a stepdown from the originally proposed blanket ban on bonuses and dividends, which intend to disincentivize the dependence on aid.

Overall, these measures will take away the risk of mass unemployment and de-industrialisation from Germany. This is good for consumer demand as such and can lead to BAU (business as usual) vis-à-vis energy consumption by multiple industries and households.

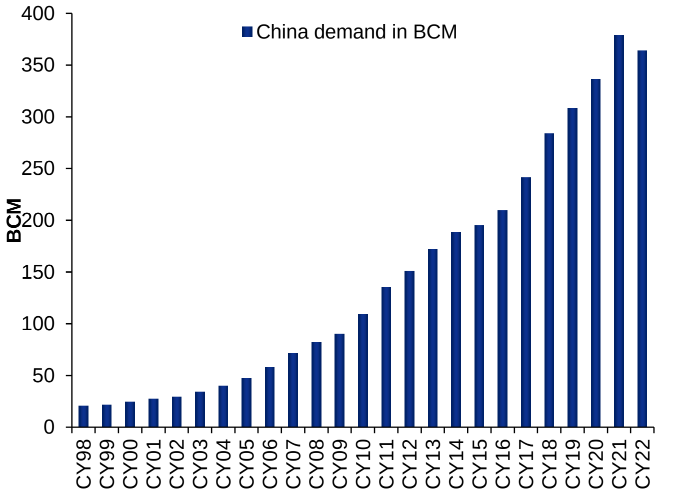
China's economy reopening - LNG import demand to increase by at least 10bcm

There are three vulgar words which should be avoided in a blanket manner at all costs while making an investment decision - China+1, Europe+1 and now China reopening. China reopening will lead to higher energy prices and bring inflation to the world - crude oil prices will go up and thus, LNG prices as well.

China's LNG demand went down by 19% YoY in CY22 ›

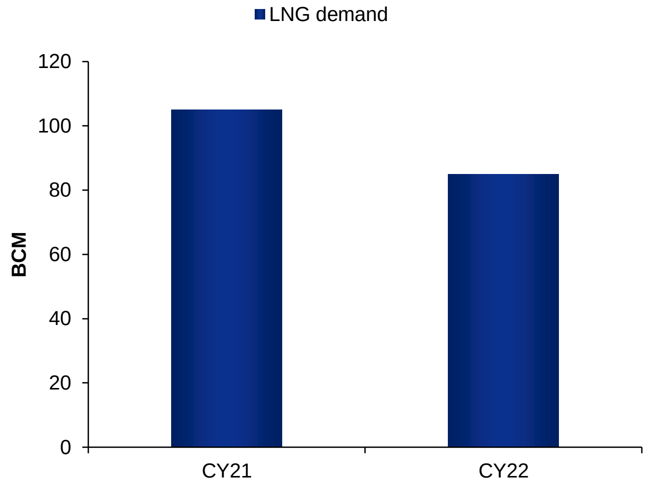
China's Zero Covid Policy in 2022 led to natural gas demand contraction by 6% and LNG imports declined by 19%. This demand contraction, in a way, saved the world of ultra-high LNG prices in CY22. If China resumes its normal operations, then gas demand is likely to rise to 384bcm in CY23F.

Figure 13: Overall natural gas demand in China declined by 6% in CY22



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 14: LNG imports fell 19% to 85bcm - a decline of ~20bcm over CY21

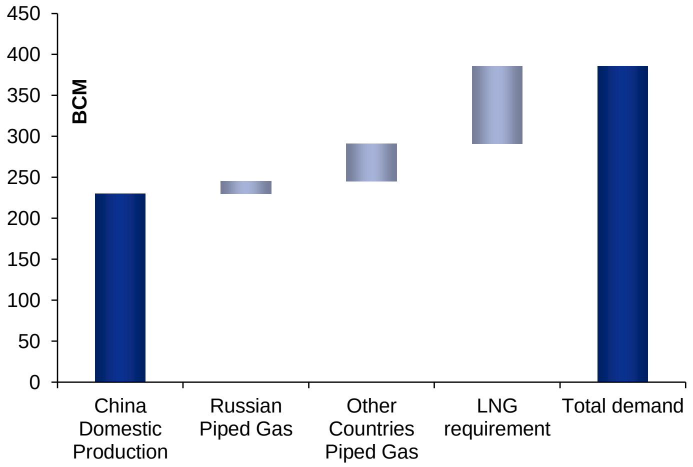


SOURCE: INCRED RESEARCH, COMPANY REPORTS

In a sub-optimal growth scenario, China's gas demand is likely to rise to 384bcm in CY23F, leading to LNG imports of 95bcm

In case of sub-optimal growth of China's economy, we estimate Chinese natural gas demand to rise by 6% to 384bcm (which is 2% higher than in CY21). Assuming that domestic natural gas production increases to 230bcm, then LNG import requirement will be around 95bcm or 10bcm higher than in CY22.

Figure 15: Assuming a 6% demand growth for natural gas in China, LNG imports are likely to be around 95bcm



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 16: For every 1% increase in demand and 230bcm domestic production, LNG imports will rise by 3.5bcm

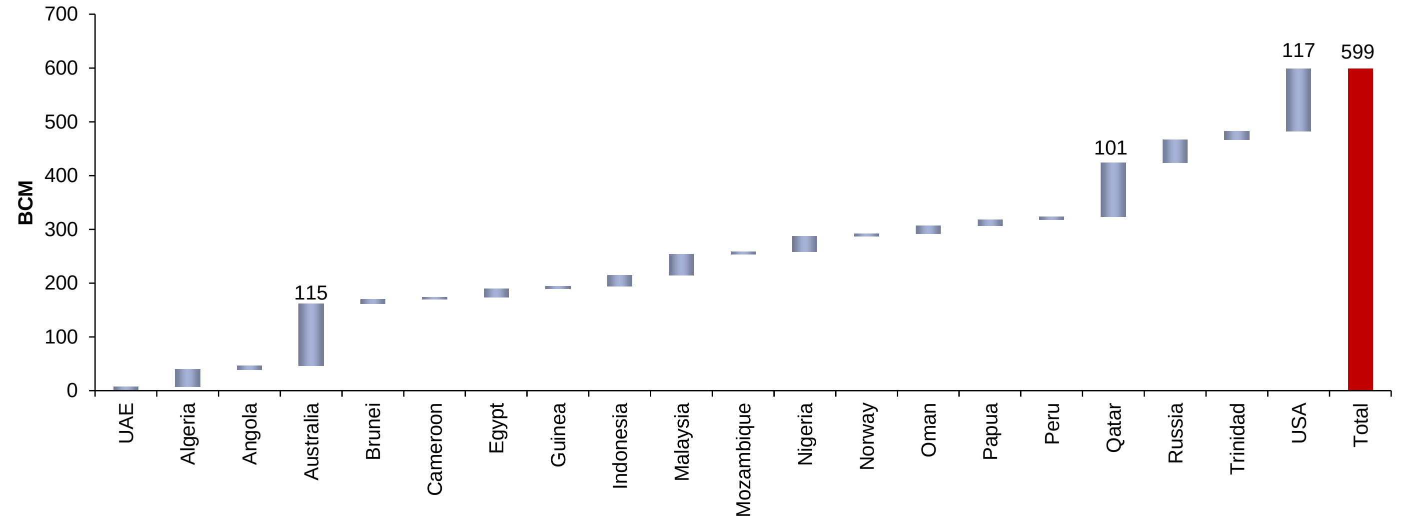
All numbers in BCM	Domestic Gas production: 218	220	222	224	226	228	230
Overall Gas demand growth 3%	95.92	93.92	91.92	89.92	87.92	85.92	83.92
4%	99.56	97.56	95.56	93.56	91.56	89.56	87.56
5%	103.2	101.2	99.2	97.2	95.2	93.2	91.2
6%	106.84	104.84	102.84	100.84	98.84	96.84	94.84
7%	110.48	108.48	106.48	104.48	102.48	100.48	98.48
8%	114.12	112.12	110.12	108.12	106.12	104.12	102.12
9%	117.76	115.76	113.76	111.76	109.76	107.76	105.76
10%	121.4	119.4	117.4	115.4	113.4	111.4	109.4

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Global liquefaction capacity - not much capacity addition

Current global liquefaction capacity is ~600bcm ➤

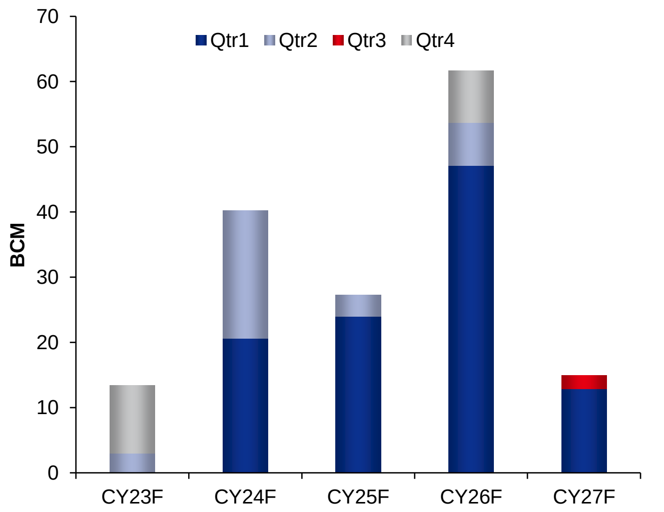
Figure 17: Qatar, Australia and USA have the highest liquefaction capacity



SOURCE: INCRED RESEARCH, COMPANY REPORTS

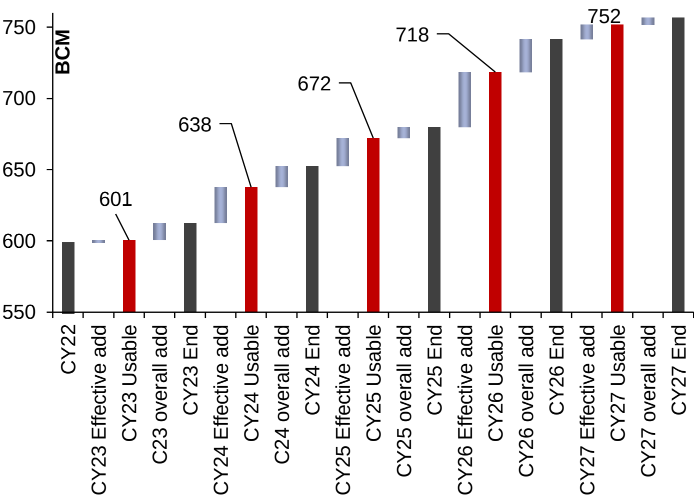
Pipeline capacity is extremely thin and most of the capacities are coming online in 2025F ➤

Figure 18: The liquefaction capacity addition is shown below



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 19: Effective capacity in CY24F is only 638bcm and in CY23F it is ~600bcm



SOURCE: INCRED RESEARCH, COMPANY REPORTS. **THE RED BAR INDICATE USABLE CAAPCITY FOR THE YEAR

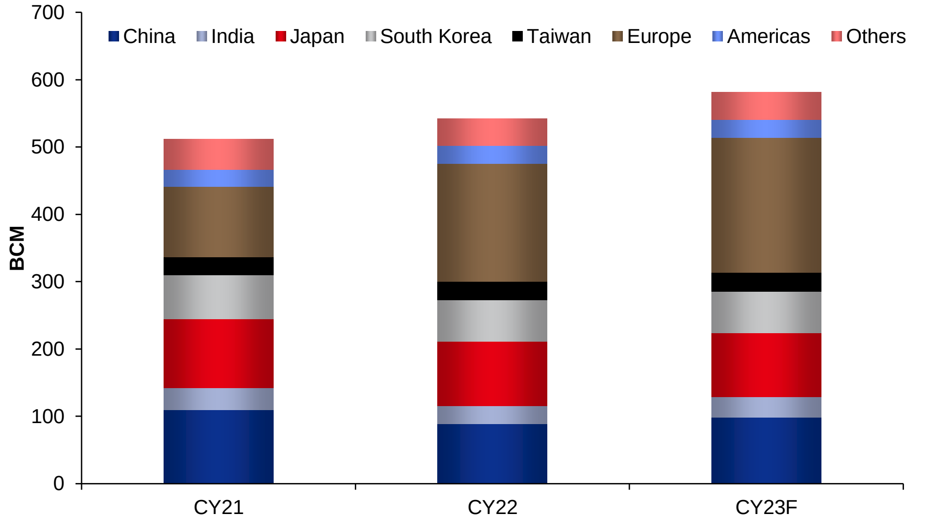
Against the 600bcm liquefaction capacity, the demand for LNG in CY23F is likely to be ~585bcm ➤

We estimate LNG demand at 585bcm in CY23F. Our estimates are based on the following assumptions:

1. With the regasification capacity in place, Germany will enter the LNG market in 2023F. As per our estimate, it will buy at least 20bcm of LNG in 2023F.
2. We estimate a normal weather scenario for Europe.
3. Modest LNG demand growth of 10bcm likely in China. It is predicted on the assumption that China's domestic gas production will increase by 10bcm in 2023F.

4. We don't believe that India's LNG demand will come back to the high levels of 2021 when it imported 33bcm. India's imports of LNG stood at 27.2bcm in 2022 and we estimate it to be around 30.17bcm in 2023F.

Figure 20: Global demand for LNG is estimated to rise to 585bcm in 2023F, up by 8% YoY

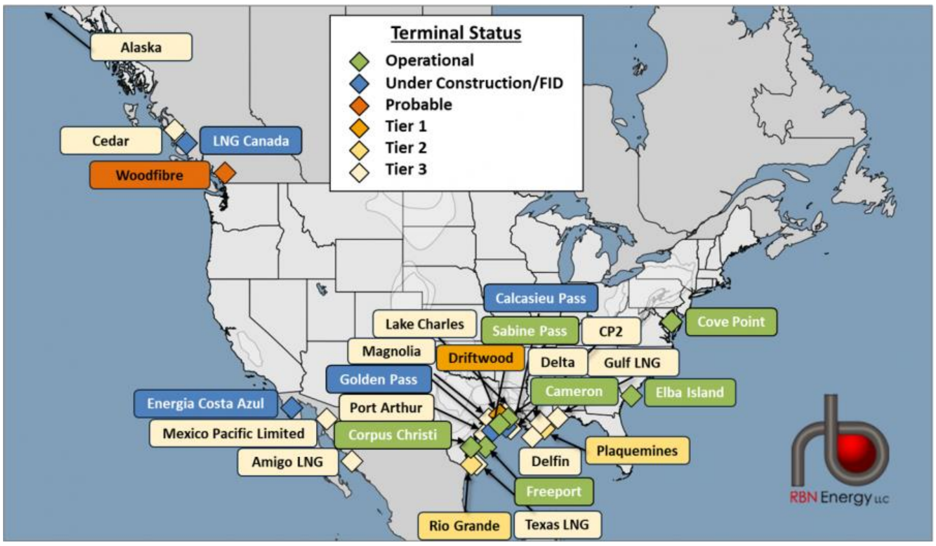


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Please note that assuming ~97% utilization rate for liquefaction capacity across the world is unprecedented

Global liquefaction capacities are based near ports and many of them are prone to natural disasters. Hence, assuming a 100% capacity utilization rate across the world for weeks to come is too much to ask for. In a most likely scenario, all LNG regasification capacity owners would like to have their storage filled at all point of time to avoid unforeseen weather risk.

Figure 21: To cite an example, most US liquefaction capacity is based near the Gulf of Mexico which is prone to cyclones and a similar situation prevails in Australia as well



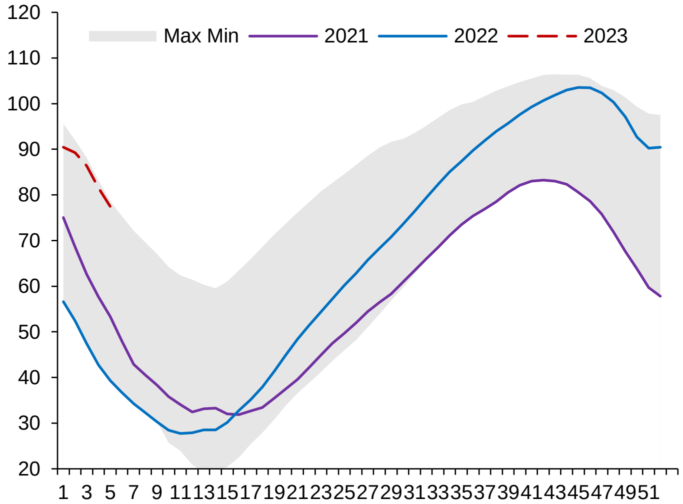
SOURCE: INCRED RESEARCH, COMPANY REPORTS

What's happening in Europe currently? It's a mild winter and just a temporary blip in gas demand

Filled European storage capacity is giving a hunky-dory feeling to the investors and markets in general. However, it's a temporary phase and the usual demand pattern will lead to a reduction in storage and the rush to buy new LNG. Also, last year, Germany ruthlessly cut demand as it didn't have the gas but this year it won't do so.

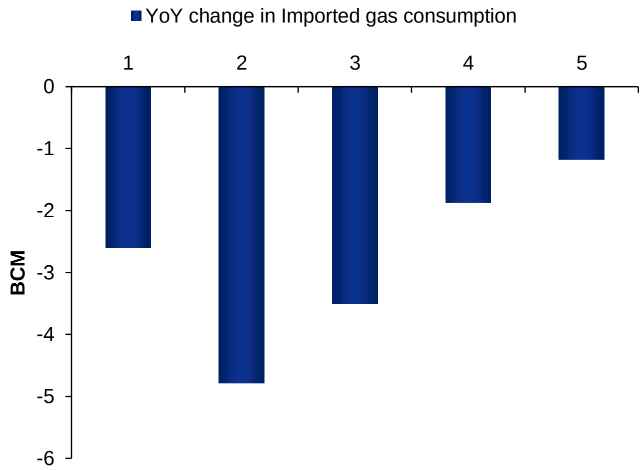
A mild winter in Europe is leading to a false feeling of security in the minds of the investors vis-à-vis LNG prices as reserves are up YoY, but this may not last for long

Figure 22: Current gas reserves in Europe are way above 2022 levels…



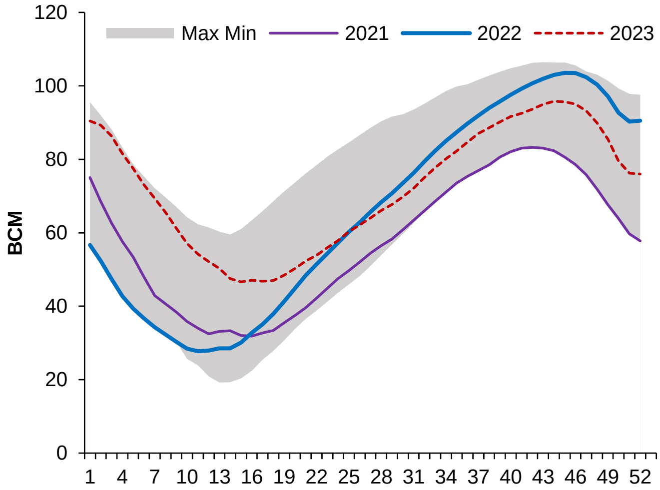
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 23: …as in the first five weeks of 2023, imported gas consumption has been lower than in 2022



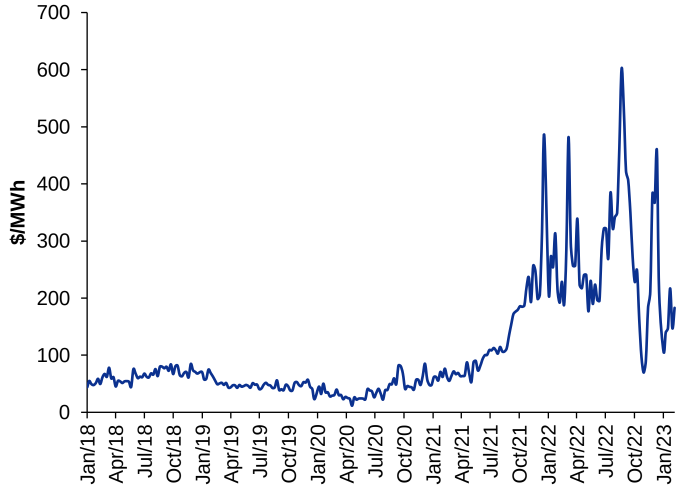
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 24: However, accounting for a rise in German gas consumption and an increase in imports as well, storage level to go below 2022 level around week 25 of 2023F



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 25: European power prices seem to have bottomed out



SOURCE: INCRED RESEARCH, COMPANY REPORTS

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