

Globes (Gina Cohen & Miki Korner) - A lot of focus has been put on global gas prices lately, so let's put some order in the matter.



Spot/hub prices

What is reported in the media are the spot prices which are the only prices that are known with a high degree of certainty. These are prices that stem from transactions done either:

1. Over the counter (OTC) which is a huge, but opaque market where dealers transact directly, and where the prices are gathered, assessed and reported by the main pricing reporting entities: Platts, ICIS and Argus by speaking to the traders.
2. Via a clearing exchange (such as ICE, Pegas, Petronext, CME) where multiple participants trade in the gas under strict rules and regulations and prices are computerized and reported every 15 minutes. Some of the pricing reporting entities also include transactions carried out on the various exchanges in their daily pricing reports.

About 30% of gas hub trading is done on the exchanges and the rest OTC, although it differs vastly from country to country. The trades on the OTC tend to be more focused on gas prices for immediate delivery whilst the exchanges such as ICE deal also in future contracts (known as future curve), which can be for up to 6 years ahead.

Hub prices are fully impacted by market fundamentals such as supply and demand and weather, but also by psychological and other factors. They are important because the hub market is the market of last resort for suppliers. If for example a supplier has a cargo of LNG in the middle of the Atlantic, and doesn't have a guaranteed buyer for it, and the US Hub price (Henry Hub) is \$3 and the UK Hub price (NBP Hub) is \$5, the supplier would ship the cargo to the UK, since it is the same cost to ship either way.

An example of the extent of hub trading, is reflected by the main gas trading hub in Europe, namely the Dutch Hub (TTF). Although Holland produces (38 bcm), imports (35 bcm) and exports (32 bcm) a year, the volume of gas traded on the TTF hub was 2,660 bcm in 2019. There is thus a lot of gas exchanging hands on paper and a lot of data available to form relatively reliable prices. The prices do not include transmission so these costs are added accordingly.

In addition, hub prices are often used as a benchmark to see whether other deals/contracts are higher or lower than the hub price. The spot/hub price is not however, as is often misconstrued, the average price in the market.

Long term prices

If you are a buyer of natural gas, you can't just survive on the spot market because although sometimes the price is low, when the price rises it can skyrocket or the gas may not be unavailable, so buyers need to secure their needs with long-term contracts at an assured price. These contracts are done via bilateral negotiations and remain confidential. The buyers can then use any flexibility they have in their long-term contracts to nominate down their purchases (down to their take or pay levels or lower sometimes) to try to optimize their purchases on the short-term market when hub/spot prices are lower.

If you are a seller it is necessary to have mid-long term contracts of about 15 years to secure a price that allows the developer to proceed with planned investments.

Long-term international trading contracts are priced based on 3 different pricing mechanisms: linked to oil prices, achieved via bilateral negotiations, and gas-on-gas competition, which is a synonym for being linked to hub prices. Contract gas prices are often quoted as a percentage of the hub price and often include a premium or discount thereto.

It is estimated that on average LNG contracts around the world in 2019, when Brent averaged around \$64 per barrel, led to delivered price for legacy long term contracts of \$9.5/MMBtu. Long-term prices since the beginning of this year have been about \$5.3/MMBtu in Europe and around \$10.00 in North East Asia.

In 2018, 60% of total pipeline gas traded around the world was priced based on gas on gas competition, whilst only 30% of the LNG traded was priced this way, whilst the rest was still traded on a long-term contract basis.

Gas Prices in Israel

There are a number of gas prices in Israel, derived from both long-term and spot contracts (Israel has as yet no hub pricing). The highest price in the market today is that which is paid by IEC to the Tamar partners and stands at \$6.3/MMBtu (with a price update mechanism in 2021). The reason for this is because of the indexation mechanism which was decided upon by the Ministry of Finance in 2012 and approved by the PUA, which is linked to the US CPI index +1% until 2020 (and -1% from 2020), and because when the contract was agreed the hub prices in Europe were north of \$10/MMBtu whilst in Asia they were between \$15-\$20.

The lowest price in Israel is also paid by IEC and stems from its recent purchase of a couple of spot LNG cargoes at \$3.6/MMBtu (this price does not include the sunken costs of the buoy and LNG regasification vessel which add another \$2.5-\$5/MMBtu) and a short-term 2 year contract signed with the Leviathan partners at \$4.79/MMBtu, with supplies started in January 2020.

In addition, private power producers are paying \$4.7-\$4.9/MMBtu for long-term contracts. This attractive price was reached because they were able to negotiate a

mechanism that linked their gas price to the power generation price which has been generally falling in Israel.

Conclusion

The past 2 years have been a roller-coaster period for global gas prices, characterized by a relatively tight global market for most of 2018, supported by higher oil, coal and carbon prices and leading to elevated spot gas prices. This then changed from October 2018 with the start of the much-anticipated LNG oversupply and lower demand, leading to the current tumbling of prices with hub prices having fallen this year to between \$2.5-\$4/MMBtu, also reflecting a closing of the gap between European and Asian prices.

Looking into the future, according to the IEA, spot gas prices in Europe & Asia will settle in a range between short-run marginal cost of importing LNG from the US (\$4-7/MMBtu) & the global long-run marginal costs of developing new LNG export projects around the world (at a weighted average cost of \$7.50/MMBtu, rising above \$10/MMBtu by 2025).

Insofar as Israel is concerned, the gas prices are seemingly falling as new gas production will come on line with the ramp up of Leviathan and supplies from the Karish field which has contracted at prices of around \$4.5/MMBtu, with the buyers of bigger quantities having achieved prices of \$4.