

GAS PRICES: ON THIN ICE

More casualties among energy
retail suppliers?

2021

GAS PRICES: ON THIN ICE

More casualties among energy retail suppliers?

THE HIGHS AND LOWS OF GAS PRICES

Wholesale gas prices in Europe and globally have been relatively stable over last 10 years but have been rocketing in recent months.

FIGURE 1 DAY-AHEAD GAS PRICE IN GERMANY



Source: : Frontier Economics based on Energate data

The potential reasons for the recent price rally are manifold and global, including recovering global energy demand as the Covid crisis gets under control and supply shortages in some regions (e.g. the phase out of the Groningen gas field in North-West Europe). See our recent article, [Gas Prices Whipsaw Across Europe](#), for more background information on the reasons for the current gas price rally.

Retailers are caught between a rock and a hard place, as wholesale prices are rising customers and policy makers are seeking to stabilise and limit retail price increases. Whether retailers are hit by the recent wholesale price rally depends on their risk management approach, which affects both the purchase price of energy and the sale to its customers. In the United Kingdom, at least 13 energy companies have collapsed since September 2021 - with more (potentially) following suit.

BOOM AND BUST: ENERGY RISK MANAGEMENT AND HEDGING

Energy retailers face different types of risks when they enter into longer term contracts with their customers.

SUMMARY

Wholesale energy prices have skyrocketed in recent weeks, reaching a 10-year high - the reasons for which are manifold. This has caused the collapse of 13 suppliers in Great Britain since September 2021. The fact that these casualties arise even before winter starts and energy demand for heating purposes picks up may be cause for alarm.

In this article, we focus on the potential consequences of high energy prices for energy suppliers.

Why do some retailers go bust, while others succeed? The answer lies in how well retailers understand and manage their risks.

How a cold spell could cause a further wave of bankruptcies? Retailers grant customers flexibility to adapt energy demand to their short term needs. Uncertainty about winter weather patterns makes it hard for retailers to accurately forecast their energy needs and complicates hedging. The resulting risk is exacerbated by current high gas prices. How big the issue becomes will only be known towards the end of the winter.

How should European governments prepare? There is no simple answer, but populist moves could make things worse.

- **Long-term price risks** – Retailers may enter fixed price contracts with their customers - in particular with smaller household customers - which exposes them to changes in the wholesale market where their energy is procured.
- **Flexibility risk** – Retail contracts often allow customers to consume more or less energy than initially expected, while contracts with larger industrial customers may specify an admissible band of demand variation around a notionally agreed contract quantity. For example, gas customers will consume more gas when the winter is cold than when it is mild. Since retailers cannot forecast with absolute accuracy how much energy their customers will consume in the future, they are exposed to volume flexibility risk as the winter may be warmer or colder than anticipated.
- **Structure risk** – Even if retailers could, in theory, perfectly forecast the exact consumption profile of their customers, which is how much is consumed on each day, they would not be able to procure that exact same profile in the wholesale market as future/forward products are less granular. For example, gas can be traded forwards for a certain month or quarter, but definitely not on a day-to-day basis well in advance. Therefore, retailers could buy a flat profile of gas across a month, while knowing that they customers will systematically consume more gas on days when they are at home than on days on which they are out.
- **Credit risks (default risk)** – Credit risk arises if your customers or wholesale suppliers default on their payments.

Retailers can use energy risk management to identify¹, mitigate, and limit these risks. There is a golden rule for energy risk management: **Buy back-to-back**. If you are a retailer that lives on a margin, never sell (too much) without having procured the energy at prices that track the sales price. Retailers can procure the energy they expect to sell to their customers via future/forward trades; as long as the contract duration does not exceed beyond the liquidly traded period of up to 3 to 4 years into the future.

There have been reports in recent weeks that several smaller energy retailers are insolvent.² Presumably, these suppliers have not followed the golden rule and procured energy short term – this might have worked as long as energy wholesale prices are stable, but does not work when they are volatile and obviously does not work when they skyrocket as they have done in recent weeks.

Does the story end here with a few risk-taking retailers going bankrupt or is this only the start of a tsunami?

FALLING TEMPERATURES AND RISING BANKRUPTCIES – FLEXIBILITY, CONTRACTS, AND THE “SHORT STRADDLE”

Retailers, especially for gas used in heating, face a risk that is particularly hard to manage: flexibility risk in relation to gas customers whose off-take is driven by temperature.

¹ Best-practice approaches for measuring risks – For example, value-at-risk (VaR) or earnings-at-risk (EaR) – are often borrowed from the financial sector and have to be adapted to the specific risks in the energy sector.

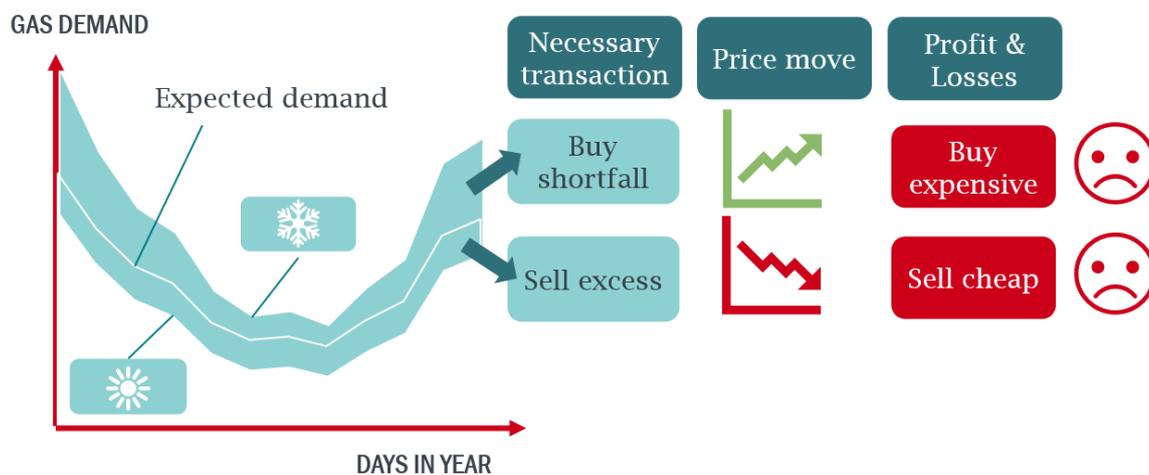
² <https://www.bloomberg.com/news/articles/2021-09-29/tally-of-collapsed-u-k-suppliers-rises-as-three-more-fail>

Following the golden rule, retailers would purchase the expected gas demand upfront and typically agree a fixed price at which they supply it to their customers. Demand forecasts will never be perfect and retailers have to adjust their gas procurement closer to the actual delivery:

- If temperatures are lower than expected in winter, gas demand for heating will be higher and they have to buy more gas in the short term at higher wholesale prices - since overall gas demand is high at low winter temperatures.
- If the winter is warmer than expected, gas heating demand will be lower and they have to sell excess volumes - purchased upfront - into a falling market, as other retailers will also be selling.

Either way, retailers can only lose from the flexibility exercise by their customers since the overall gas market moves in the same direction as their customers.

FIGURE 2



Source: Frontier Economics

Under normal market conditions, this will lead to manageable losses which will be priced into the offer the retailers make to their customers. However, at the current price rally a cold spell which requires retailers to procure a lot of additional gas short term at high wholesale market prices, while having entered into a supply commitment with their customers at times when gas prices were lower could push further retailers to the brink of insolvency.

Take the following simple example: if we face a two week cold spell in Europe, this could lead to 70 TWh (7 bcm) of additional gas demand.³ Short-term gas wholesale prices might reach 140 €/MWh, approx. seven times the price level beginning of the year. The aggregate of gas retailers could face a loss of more than €8 billion within a two-week period.

It is uncertain how many retailers could survive such an additional hit.

³ See IEA Gas Market Report Q2-2021, p. 37. Normal winter gas demand is around 1.6 bcm/day but reached almost 2.4 bcm/day in February 2021 during a cold spell.

REFINING RISK MANAGEMENT

This also means that risk management should not end with procuring sales back-to-back.

Risks also need to be priced, monitored and limited. There are two aspects that need to be added together. Firstly, any risk that leads to a potential loss needs to be made transparent and priced in. This is very obvious for the temperature-driven volume flexibility risk previously discussed.

Secondly, retailers effectively commit market risk capital. This is capital that needs to be available to handle any critical situation, i.e. the realisation of a bad risk such as current gas price crisis. The market risk capital (MRC) can be evaluated, for example, based on the Earnings at Risk (EaR). EaR is mathematically calculated, e.g. using Monte Carlo simulations and considering possible scenarios like the 1% or 5% worst commercial outcomes for the company. MRC needs to be sufficient to cope with such outcomes. MRC effectively needs to be backed by equity as corresponding capital cannot be committed to other purposes. It therefore attracts an opportunity cost in the form of a required return on the MRC. This return ultimately needs to be priced into retail prices.

But even when pricing-in the risk, a company is not immune to bankruptcy should bad risks materialise. Therefore, constant (i.e. daily) monitoring is required to check whether the risk exposure (as measured through EaR) is within corporately agreed risk limits and does not exceed the committed MRC. In periods of volatile prices (all other things equal), EaR increases and this could lead to risk limit breaches, even if the company acts in the same way as during more stable times.

The risk of a limit breach needs to be actively addressed, either by consciously raising the limit (and thereby effectively committing more market risk capital) or by lowering risk exposure and EaR for example by limiting certain sales activities that are particularly risky (e.g. several energy retailers - including E.ON,⁴ one of the largest retailers in Europe - have temporarily stopped taking new retail customers), by altering the risk position or by reducing certain non-core activity that also binds some market risk capital.

HOW SHOULD EUROPEAN GOVERNMENTS PREPARE

Price spikes have raised concerns around the affordability of energy for consumers. European governments have focused on limiting the impact to consumers. The European Commission has published a 'toolbox' to mitigate the effects of the sharp spike in energy prices which includes short-term measures such as payment deferrals, tax exemptions and direct support payments.⁵ Spain, France and Italy have already taken measures to curb the price rise for customers.⁶

Retailers might be caught in the middle between rising wholesale prices and political pressure on retail prices. The current measure might even worsen their situation:

- Price caps and a freeze of customer prices would further increase losses they incur if the winter season is cold.

⁴ <https://www.reuters.com/business/energy/german-energy-firm-eon-suspends-new-natural-gas-contracts-2021-10-12/>

⁵ https://ec.europa.eu/commission/presscorner/detail/en/fs_21_5213

⁶ <https://www.ft.com/content/5805c3d0-f102-48fc-9cfb-d3b721b85c34>

- So far, customers from collapsed smaller retailers could be allocated to larger retailers, potentially causing further losses.

Policy makers need to act prudently and wisely in order to relieve, rather than worsen the situation. This may involve:

- Design any interventions in a way that does not exacerbate the situations for retailers (e.g. do not punish market players who have carefully hedged and are therefore still in good financial health to carry the cost of bailing out others who have acted less prudently).
- Compensate emergency suppliers for losses incurred from taking additional customers.
- Review licensing regimes to ensure that retailers act wisely and professionally and do not exploit the option of the state stepping in to bail them or their customers out.

Winter temperatures, wholesale price developments and policy choices will determine whether there will be more casualties among energy retail suppliers.

AUTHORS

CHRISTOPH RIECHMANN

Director

MICHAEL ZÄHRINGER

Manager

WANT TO KNOW MORE?

WWW.FRONTIER-ECONOMICS.COM

HELLO@FRONTIER-ECONOMICS.COM

+44 (0) 207 031 7000