

ADVANTAGE UTILITIES
YOUR COMPETITIVE ADVANTAGE

QUARTER 4 – 2021 ENERGY BUDGET OPTIMISATION REPORT ▲

UNPRECEDENTED ENERGY PRICES

What has contributed to high prices?



WINTER SUPPLY CRISIS

Could a cold winter deepen the crisis?



HOW TO HELP

What are the options for your business?






Published: 4th October 2021

HELPING YOUR BUSINESS ACHIEVE COMPETITIVE ADVANTAGE

WELCOME TO THE ADVANTAGE UTILITIES ENERGY BUDGET OPTIMISATION REPORT Q4 2021

Here we take a detailed look at the current International and UK market drivers. These are the factors that will dictate the trading opportunities in 2021 and ultimately the cost of energy over the next 12 months.

ISSUES COVERED IN THIS REPORT:

-  **Unprecedented Energy Prices**
-  **Winter Supply Crisis?**
-  **How to help?**

Uncertainty and volatility are always present in the energy market. This means it is important to be informed about what could affect your energy budget as we like to think that more information drives smarter decisions.





THE 'PERFECT STORM' HAS CREATED UNPRECEDENTED ENERGY PRICES

The volatility of wholesale gas and power prices has been a huge shock to the energy market. And when governments are getting involved and energy is making the headlines in all the news, we know that this is uncharted territory.

We recently published an urgent energy report ahead of our usual Q4 report due to the current turmoil within the energy markets in the UK, Europe, and globally.

The below graph shows the catastrophic and meteoric rise that has been caused by a cocktail of drivers, issues, events, and fundamentals that have come together to create the perfect storm.

UK GAS & POWER SEASONAL PRICES (2008 - 2021)

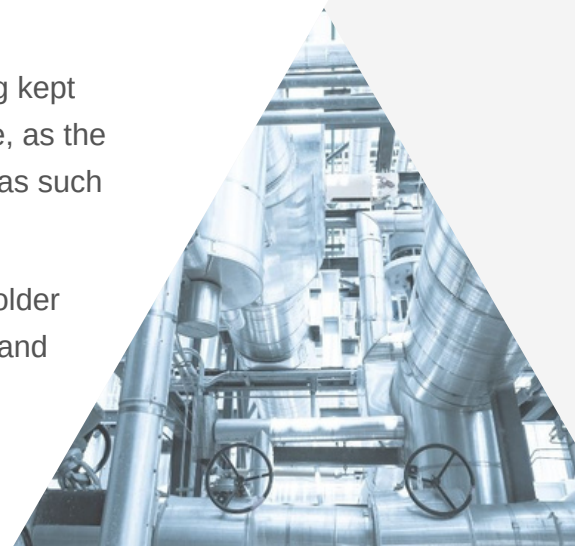


Source: Reuters

For those that may have missed our report sent two weeks ago, we will detail below once more the main contributions to this absurd scenario that we find ourselves in, that has never been seen this drastic in the energy market.

- Abnormally cold winter in Asia during early 2021 re-routed LNG shipments from Europe to Asia. (Typical UK arrivals were around 8-10 tankers per month last year vs 1 per month over the last 6 months)
- Because of this, UK/EU was forced to deplete gas storage to get through remainder of winter.

- In turn, the UK had a very late cold snap in March and April that forced us to delve into gas storages even further.
- Governments are driving for power to be supplied from renewables and began a program of taking coal fired and nuclear units offline, which put pressure on CCGT.
- Low wind in Northern Europe resulted in decreased outputs from renewables and increased reliance on gas and coal.
- Unplanned outages on top of planned maintenance to gas import lines after delays due to Covid.
- Europe has struggled all year to manage baseload while still storing gas for the upcoming 21/22 winter heating period. Storage levels are still below optimal as of September.
- Demand is still high in Asia as it continues to recover from the frigid winter by adding to storage for upcoming 21/22 winter.
- Increased reliance on coal in Europe to meet baseload has increased carbon prices.
- In turn, carbon price adds margin to gas and power prices and even more so when CCGT is required heavily.
- Several disruptions to LNG output in US due to active hurricane season. Freeport (Texas) LNG is currently down due to hurricanes.
- Flows from Russia to Europe have been abnormally low for most of the summer due to maintenance in Russian facilities and Russia keeping gas back for their own winter storage.
- Nord Stream 2 pipeline is now complete, but political fighting will keep that new flow of gas side-lined for now. Gazprom has pledged to meet the quota of gas flow to Europe for this year.
- U.S. production and LNG exports have had many periods of being kept landlocked for own consumption, rather than being sold to Europe, as the U.S. experienced heat waves and abnormally cold weather in areas such as Texas.
- Because of the La Nina pattern forecasted for the 21/22 winter (colder winter), market analysts have already priced in higher winter demand into the gas pricing.

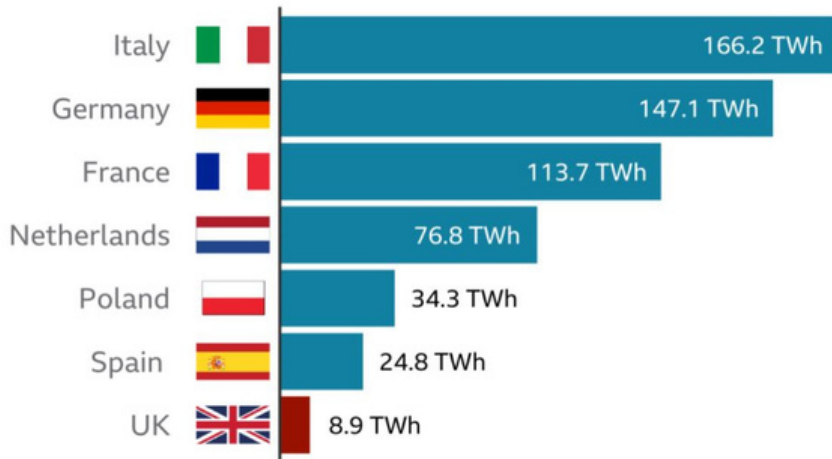


One of the problems that hits the UK harder than other countries in Europe, is due to our low levels of gas storage capacities when compared with our EU counterparts.

The graphic below shows how little our facilities are in comparison.

The UK has much less gas storage than some other European countries

Selected countries, terawatt-hours



Figures are for 18 September 2021
One terawatt-hour is equal to an output of one trillion watts for one hour

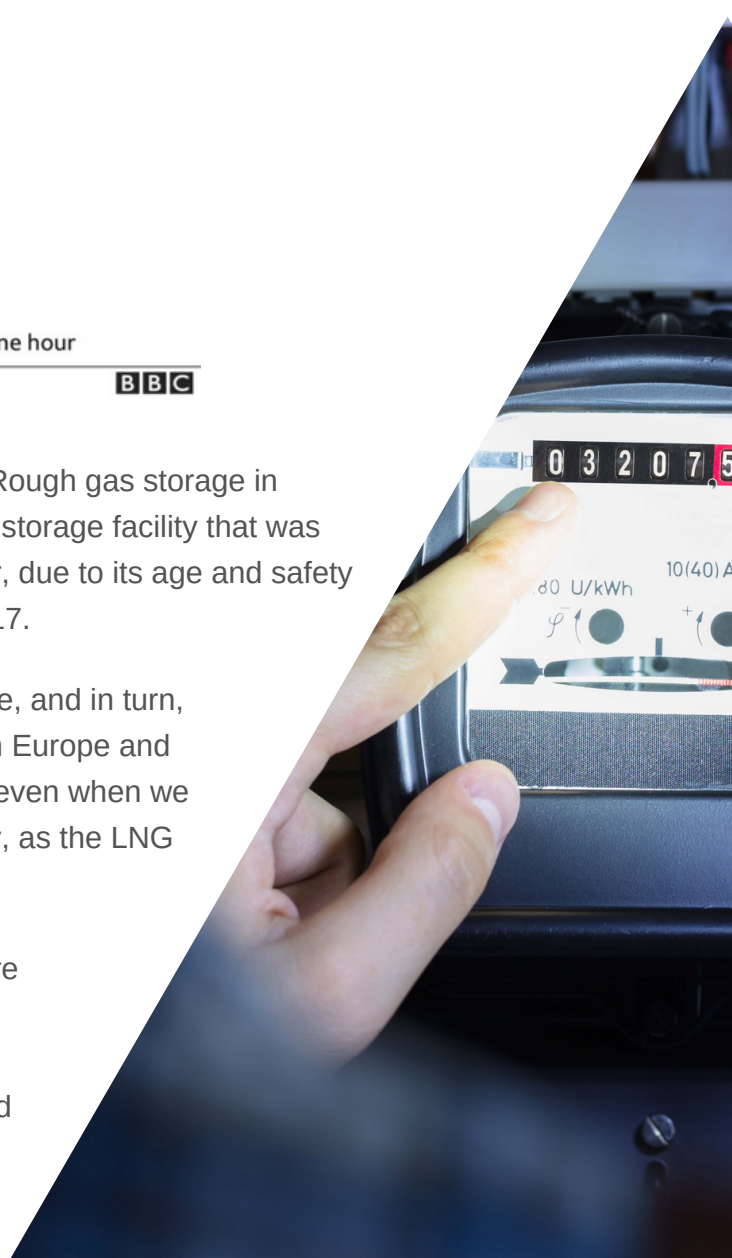
Source: Gas Infrastructure Europe



This of course did not used to be the case when we had Rough gas storage in operation. Rough, was a Centrica owned underwater gas storage facility that was nearly triple the current capacity seen in the UK. However, due to its age and safety issues it was deemed unusable and forced to close in 2017.

This limited the gas we could import and store for later use, and in turn, meant we are now much more reliant on gas imports from Europe and LNG cargo arrivals. This hasn't been an issue up to date even when we have seen periods of very cold spells and market volatility, as the LNG arrivals to the UK were plentiful and steady.

This has completely changed over the last 6 months where we have seen LNG arrivals go from circa 10 per month to the UK down to only 1 per month at best. With depleted storages to make up for the deficit meant that volatility and price increases came together all at the wrong time with other fundamentals.



Most LNG vessels have been seen going to Asia, where the demand was even higher and greater price margins meant a more attractive price, in what is a very cutthroat industry.

Thankfully, as per the below graph, the UK has managed to urgently inject over the last 2 months to see our storage levels now above 2019 and 2020 levels. Without this, we could have been in an even worse position price wise if that is even possible to believe.

However, with the lack of LNG arrivals it still means this storage level is at risk of being depleted very quickly once more, especially if the coming winter is harsher than normal. And the winter ahead is going to be a very important factor to watch regarding current volatility and supply/demand.

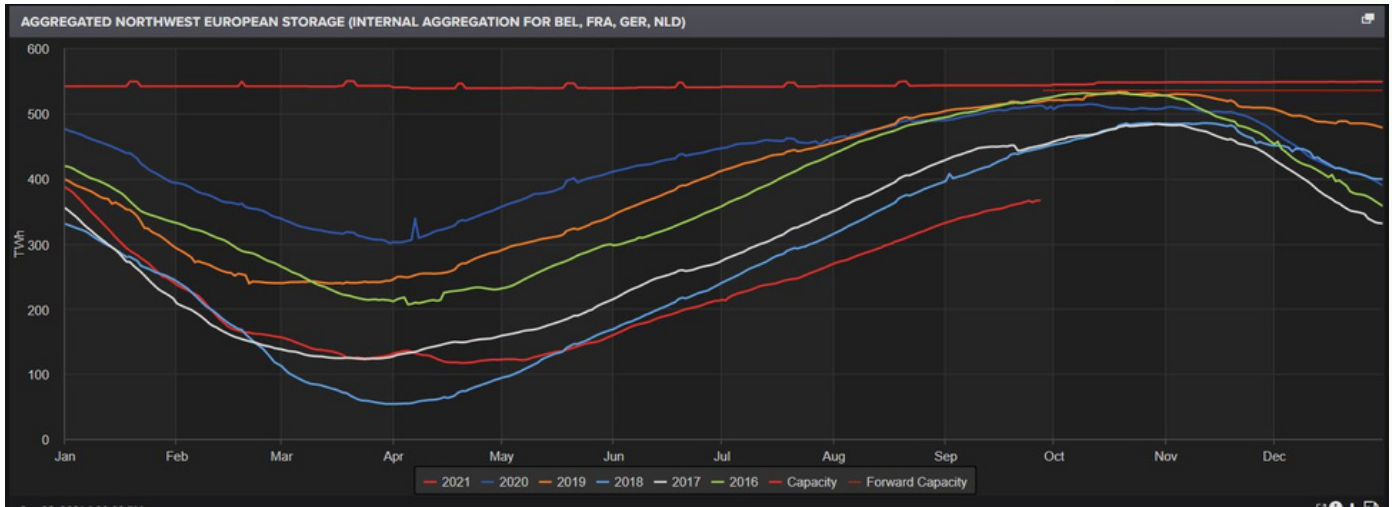
UK GAS STORAGE LEVELS (2018 / 2019 / 2020 / 2021 COMPARISON)



Source: Reuters

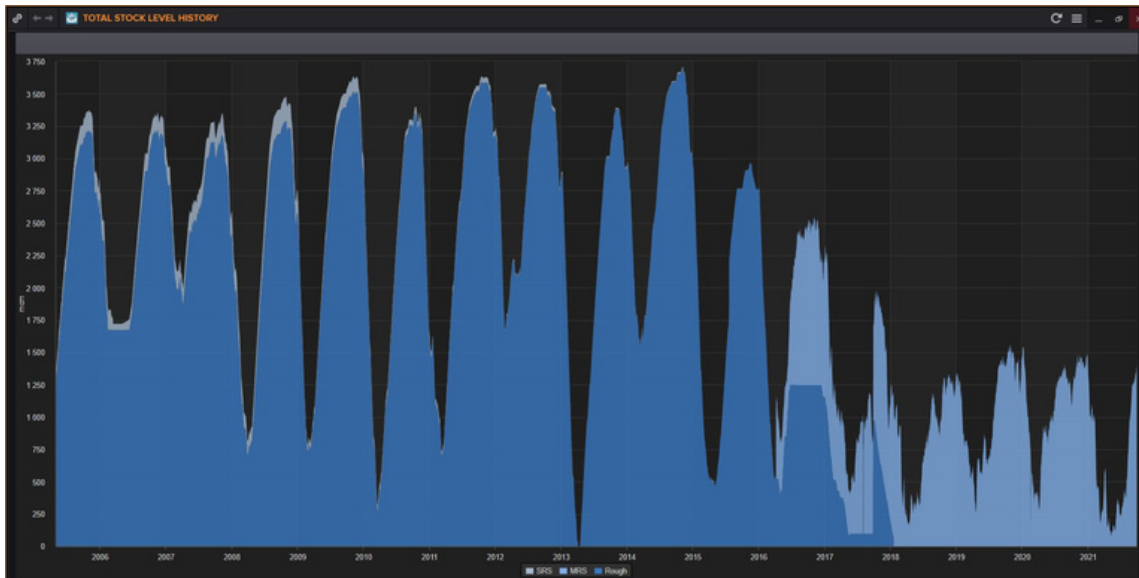
European storages are in a similar position and have been under seasonal normal since around May of this year. However, most EU hubs have a greater capacity than the UK, so the effect is less drastic.

EUROPEAN GAS STORAGE LEVELS



Below graph in the darker shade of blue shows the volume previously at the UK's disposal from Rough storage, up until 2017. The light blue is Medium Range Storage (MRS) and is what we have remaining once Rough was closed.

UK GAS STORAGE INCLUDING ROUGH & MEDIUM RANGE FACILITIES



WINTER SUPPLY CRISIS – ARE BLACKOUTS POSSIBLE?

Wholesale gas prices have reached new all-time highs, stoking concern that a cold winter could deepen a crisis that has led to the collapse of multiple energy suppliers and raised fears of factory shutdowns and soaring bills.



The cost of coal and carbon emissions permits also hit record levels, while crude oil exceeded \$80 a barrel for the first time in three years this week, amid a widening global energy supply crisis. Oil has since lost ground to trade back down to the \$78 level.

Adding to the woes this week was the flow of Russian gas via the Yamal-Europe pipeline fell by more than half. Perhaps, a political stunt to force the hands of the powers that be to commission the new Nord Stream 2 pipeline urgently, as the downturn came only days after Russia's news statement saying that they are ready to open the taps to Europe if allowed (currently regulators in Germany need to approve its opening). It's coming online would be a very welcome bit of news.

The situation in the UK, where market prices have quadrupled in the past year, is particularly acute. Europe-wide price rises have been compounded by the UK's unusually low gas storage capacity, as well as outages in the electricity system, leading to increased reliance on gas power plants.

The UK has already seen around 5 suppliers collapse over the last 2 weeks, which is more than likely due to lack of hedging power in this volatile market. No doubt there will be more casualties before the dust settles. This very much highlights the extremities and unprecedented issues we are facing in the energy world right now and is very sad to see people losing their jobs, as well as businesses and domestic consumers facing excessive bill hikes.

UK ministers have been quick to assure that the UK has enough gas to avoid the lights going out or a 1970s-style three-day working week, but a colder than normal winter could certainly push us to the edge.

The catalyst for the spiral started rumbling earlier this year, when demand in Asia, especially China and India, started to ramp up after the Covid pandemic. However, few could have predicted the catastrophic reaction seen of late. A return to stronger economies in both China and India after lockdowns helped lift the price of fossil fuels, with thermal coal, used to generate electricity, up 96% this year.

Price pressure has been driven by an energy crunch in China, where attempts to decarbonise have met the reality of widespread factory outages and interrupted power supply to homes as winter approaches, fuelling coal demand.

In tandem, as the cost of burning fossil fuels increased, so did the price of carbon tax that has to be paid for the emissions emitted. It is then easy to see the snowball effect that has been seen over oil, carbon, coal, LNG, gas, power etc.

GOVERNMENT VIEW AT PRESENT

It's important to note that the government does not expect disruptions of gas supply through winter, with the BEIS Secretary confirmed this weekend that despite high prices, the UK has diverse sources of supply and strong mechanisms to ensure required capacity.

For power, the supply security picture has been clarified by National Grid ESO in recent months, with the system operator cautioning that generation capacity margins will be tight into Winter. Though they anticipate lower energy reserves, National Grid does not foresee any need to trigger emergency supply mechanisms.

The surge in energy costs will be taken up by European leaders themselves when they meet in Brussels for a summit on Oct. 21-22, according to a draft of the meeting's agenda seen by Bloomberg.

FURTHER FUEL ADDED TO THE FIRE

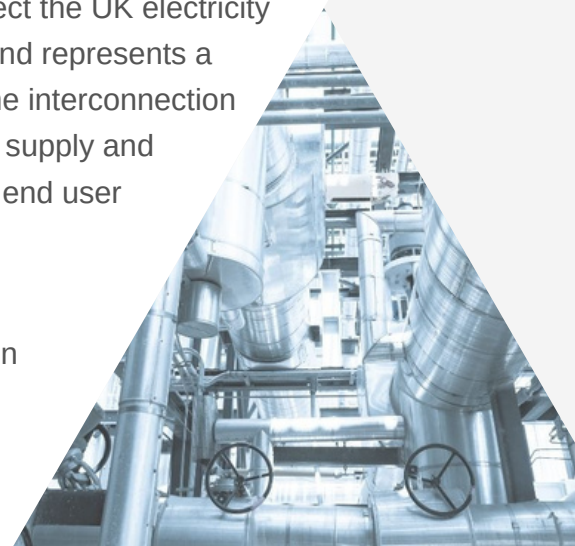
A recent fire at a UK power import connector further tightened the stranglehold and lift prices higher than was thought possible.

The fire at a converter station on a UK-France electricity interconnector has created additional uncertainty in a market already grappling with record high prices. The 2GW connector with the European mainland is supposed to support the UK network, providing additional capacity to help meet demand, especially in winter when usage is at its peak. Following the fire there are now doubts over whether the cable will be available at all this winter, tightening supply margins and creating a price squeeze that many end users will find unpalatable.

What is the interconnector?

IFA-1 (as it is known in the industry) is one of six cables that connect the UK electricity grid to those of other countries; the cable has a capacity of 2GW and represents a third of the total capacity of all those interconnectors, and half of the interconnection with France. This imported electricity helps to keep the UK system supply and demand in balance and is especially important in the winter, when end user demand is at its highest.

For context, 2GW of power represents around 3.5% of National Grid's expectation of peak demand for this coming winter (based on the Winter Outlook report); however, in the actual peak hours of usage, it does represent nearly 50% of the anticipated margin at those specific hours of the winter.



Why have prices reacted so strongly?

The UK has already been facing uncertainty over gas supplies for the coming months; a lack of imports of LNG (liquefied natural gas) from the Middle East and US, extensive Norwegian maintenance, low gas storage levels, and political concerns regarding flows from Russia have all combined to send gas prices sky high. As gas is still the principal generation fuel for the UK, this has translated into high power prices, exacerbated by the cost of carbon emissions, themselves close to record highs. This all adds up to the ‘perfect storm’ we have highlighted.

Europe and globally cannot escape the tidal wave.

The latest warning that the power crunch is spreading across Europe comes from the Norwegian grid operator Statnett SF, which said electricity supplies in the southwest of the country are “pressed” because of low inflows and falling stockpiles.

The shortage could crimp exports to other markets since that part of the country is a hub for power shipments abroad. The U.K, which is grappling with a supply crisis of its own, plus Germany and Denmark are all connected to the Norwegian grid via long cables on the seabed.

This situation is mirrored across the globe. We have seen colder months and a cooler summer, to which people have used gas in the summer for heating.

Will the market fall, and prices stabilise once again?

Weather will play a big role. If Europe has a mild winter and the gas and electricity systems are untested, then sellers may return to the market and prices could fall.

And if we see potential bearish elements come to the fore, such as Nordstream 2 being commissioned before the end of the year and in turn increased flows from Russia, markets such as coal, oil, and carbon posting overbought territory on a technical side of things seeing a reversal, decrease in Asian demand, increase in LNG to Europe and the UK, ramp up in production of U.S. shale and LNG exports, return to better renewable outputs that have seen many recent lulls.

The new North Sea Link will also open this year, providing a two-way 1.4 GW renewable power supply between Norway and the UK.



All of these have the potential to reverse higher prices. However, whilst uncertainty and volatility remain, prices could well retain their strength and markets remain dominated by buyers. Prices therefore could worsen further before any improvement is seen, leaving exposed end users to higher than anticipated energy prices and bills.

Impact to the business economy

Faced with record high prices, there are signs that end user demand is beginning to fracture. Gas usage amongst the heavy industrials has fallen due to gas price exposure, with operations such as fertiliser production no longer cost effective at these prices. The loss of CO₂ supply, a byproduct of the fertiliser industry, will have a knock-on effect on other industries, particularly the food and drink industry where the gas is used for packaging and carbonation.

If this knock-on effect feeds down through the economic supply chain, we may start to see further demand reduction as wider industries are forced to turn down. Hopefully government intervention will not see such drastic actions and shutdowns occur.



WHAT CAN YOU DO TO HELP DURING THIS PERIOD?

Time your renewal right

Given the current uncertainty, forward planning for businesses across the country remains challenging to say the least. But if your contract end date is approaching, you need to be looking at your options now.

With the recent gains in wholesale energy markets, you are likely to be seeing significant cost increases to your energy bill. Although it can be tempting to hold out on your renewal when the market is high, like it is currently, it is always preferable to have a contract in place.

Flexible contracts

With a flexible supply contract, the ongoing risks associated with wholesale market volatility can be spread out, enabling you to limit upside budgetary risk whilst capitalising on downside potential. Flexible contracts also enable you to buy energy based on a risk management strategy, allowing you several different approaches to procurement based on your risk aversion.

By being able to purchase month ahead when the market is at the highs we are seeing, it means you can ride short term volatility, before hopefully seeing the market come back down to more realistic levels, and then purchase larger portions to balance out and smear the overall purchases, and thus see a much better overall budget figure.

To learn more about Flexible Purchasing, Click below to watch our video.



Unlock funds and futureproof your business

With both the commodity and non-commodity elements of the bill on the up, it's well worth finding ways to offset these increases to your energy bill and to futureproof your organisation by combating wastage, reducing consumption, and ensuring supply.

- Recover revenue for potentially up to 6 years for incorrect billing and date errors.
- Monitor consumption & target wastage via the Advantage Analytics portal, to spot inconsistencies and periods of potential reduction.
- Invest in on-site generation and storage such as solar panels, CHP, heat pumps, battery storage, to help lower your reliance on the grid and avoid higher energy costs.
- Staff awareness of the current situation and ensuring everyone plays their part in reducing your company's energy use and wastage.

It has never been more important to double down on energy efficiency and weigh up the opportunities of generating and storing renewable power on site to reduce costs and increase energy security.

For those organisations that have flexibility, back-up power sources, or can load-shift, the situation is more positive. These businesses have an opportunity to sell their excess electricity at premium rates and create a solid income from flexing their energy.

It is also important to note that suppliers are currently updating pricing on contract offers much more frequently than usual, which means the timeframe for businesses to accept contract offers is tight. It is important for signatories to be available for acceptance as soon as possible once contracts are received.

There have been instances of suppliers pricing and then pulling them in the space of minutes and hours.

We will of course endeavour to do whatever we can to help our client base or new customers no matter the size of business. Please do not hesitate to contact your account manager or our office for any help or advise around the current situation.





HOW CAN WE HELP?

Advantage Utilities is a full-service energy consultancy with over 20 years experience in helping customers overcome challenging markets, implement a variety of measures to reduce grid reliance, reduce energy consumption and carbon emissions and explore alternative, more cost-effective purchasing strategies.

Should you have any questions or queries regarding energy contracts, renewable energy products and services or energy management then please do not hesitate to contact your account manager or a member of our consultancy team on 0207 371 5360.

CONTACT US

 0207 371 5360

 info@advantageutilities.com

www.advantageutilities.com

Coda Studios
189 Munster Rd
London
SW6 6AW

