Gas and CO2 supply woes could be alleviated by preparing for climate change

You've seen what's happening: the steady rises in gas prices since the start of the year have resulted in a sudden wave of concern from UK politicians, the energy sector and industry about threats to operations and consumers.

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The high price of gas caused a company supplying CO2 to the UK food industry to shut down. You can read the details (if you haven't already) <u>here</u>.

What's behind the rise?

The background macro trends have been building for <u>some time</u>. First, demand for gas has shot up in Asia as the region recovers from COVID-19. Second, some supplier operations, including in the US following Hurricane Ida, are down. Third, while Russia is fulfilling its European gas supply contracts, some, including the International Energy Agency, have <u>said</u> the state could be doing more to help.

To a lesser degree, low wind speeds and a <u>fire</u> at an electricity interconnector between the UK and France have affected electricity supply.

These elements, combined with the fact natural gas is <u>used to produce</u> the CO2 used in the UK to help slaughter animals and preserve food, have resulted in another hurdle (alongside COVID-19 and the fallout from Brexit) impacting food availability. The UK government has stepped in to support (at least temporarily) the firm, CF Industries, that is providing the CO2.

As a result of the intervention, a <u>huge jump</u> in the price of CO2, from £200 to £1,000 per tonne, could lead to food price increases.

There's an issue getting... CO2?

It's not without a sense of irony that, on the one hand, we have a shortage of carbon dioxide that's used to preserve our food, while on the other we are pumping so much of it into the atmosphere for free and damaging the planet.

While some, short-sightedly, blame green energy for energy security problems, there are a number of ways in which a better-advanced clean energy system in the UK could have dampened this issue.

As food industry bodies have <u>pointed out</u>, the UK's CO2 production is limited to a small number of sites where carbon is captured from gas when fertiliser is made.

The UK has a chequered history when it comes to developing carbon capture and storage (CCS) technology – most notably in 2015 when a £1B competition to develop CCS was <u>abruptly cancelled</u>. Had this not been the case and had prior schemes been seen through to fruition, a more-established carbon capture industry would mean a greater number of sites would be available to produce CO2, and certainly at costs far <u>below</u> £1,000 per tonne.

In a more general sense, an energy system with a greater degree of (increasingly cost-effective) renewables – alongside nuclear – and less reliance on fossil fuels would <u>limit exposure</u> to the vagaries and volatility of international markets for oil and gas.

What can I do?

There's a third way in which better climate planning can help – energy efficiency. Investing in home-based energy saving measures, such as insulation or alternate heating and cooling technology such as heat pumps, means homeowners can (literally) insulate themselves or their tenants from these price swings, while helping tackle climate change.

Of course this isn't an option for everyone, so it's important that fuel poor and

low-income families remain a priority in whatever solution reached <u>this time</u>. Heat pumps could also <u>help</u> here.

Energy efficiency measures are among the most cost-effective to reduce emissions and will help control home energy costs in the long term. They will be a cornerstone in the suite of actions needed to get the UK to its net-zero emissions by 2050 target – and also a key element in a future energy system that avoids the uncertainty inherent in overreliance on gas.

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