Why the 'Beast from the North' expected in the coming week should have only a minimal effect on the economy and on energy supplies

EMBARGOED TO 00.05 Hours BST 21 January 2019

In mid-February last year we issued a "*Buy Candles*" warning in the office: a large high pressure building over Scandinavia might drift south and becalm UK and northern Europe's wind farms for days on end while bringing ferociously cold weather**. Gas and electricity demand would soar, there would be little UK or European wind energy, gas-fired generation would be curtailed due to domestic heating demand for gas, and potentially the lights could go out.** Fortunately the high pressure remained firmly anchored over Scandinavia, bringing strong winds to UK and northern Europe. **Near-record levels of wind generation kept the lights on for most, with only a few local power-cuts despite a Gas Deficit Warning. We scraped through.**

During this period low temperatures, 9° below seasonal norms, meant the highest gas demand for seven years. **Supply shortages and lack of storage meant gas demand exceeding supply, reducing pressure across the network. Industrial consumers were instructed to cut consumption.**

Electricity demand peaked at some 62,000 MW, of which 13,500 MW (22%) came from wind generation. 2,500 MW was available from the European Grid which was also benefitting from high wind generation.

If the wind farms had been becalmed we would have needed to make up 16,000 MW. We might just have had enough gas-fired capacity to achieve this, but would not have had the gas to fuel it. The lights could well have gone out….

Forecasters are predicting a return of cold weather after a fairly mild winter so far. This time it will be a 'Beast from the North'. Unlike last February, the weather is driven by deep low pressure systems, which tend to move quickly and have more localised impacts, and more importantly are accompanied by strong winds. **Even if electricity consumption and gas demand rise, we should have enough wind and coal generation to see us through. We should survive this particular Beast.**

But, like last winter, a Sudden Stratospheric Warming event has taken place over the Arctic (on 2 January), which could trigger a repeat of February 2018 conditions later this winter. The Beast from the East may return in February. Our energy supply situation remains very similar to last year. The new 1000 MW Nemo Link with Belgium will be operating from the end of January, although it will mainly be exporting due to the parlous state of Belgium's electricity system.

Again we will be at the mercy of the wind. Low wind generation means we would need all of our gas generation at full output, as well as our nuclear, coal and other minor generators. The gas supply position is currently better than at the end of February last year, but we have precious little storage, so our surplus can turn into a shortfall in days, especially if cold weather affects the supply.

So we hope again this year that when the Beast from the East returns, the high pressure will remain over Scandinavia, and the wind will blow. Otherwise it will be back to candles.

What about the economic effect? Last year there was a pronounced seasonal pattern. **Cebr estimated that the cold snap cost GDP £1 billion a day for each day that it lasted (slightly less than a week). The official statistics show that GDP growth for Q1 fell to 0.1% suggesting a total shortfall for the quarter (though mainly made up subsequently) to the end of March of less than £2 billions**. At this stage, it is far too early to make any estimates for what the impact might be this year. On the one hand technology is making us less dependent on getting to work, on the other Brexit uncertainty is causing businesses to try to build up inventory.

But the energy analysis suggests that the critical factor will be wind. The economy has become so dependent on wind power that we will suffer if the wind fails.

Contact: Mike McWilliams mike@mcw-e.com phone 01580 763009