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Coal Crunch?

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With oil prices receding from the nineties, the energy crisis almost seems like in recess. Almost, because elsewhere there are millions of people affected by power shortages amidst an old fashioned Winter. It reminds that the energy crisis is affecting the energy sector horizontally and showing problems in an industry that not long ago seemed like our last resort safety net.

Source: Al-Jazeera.

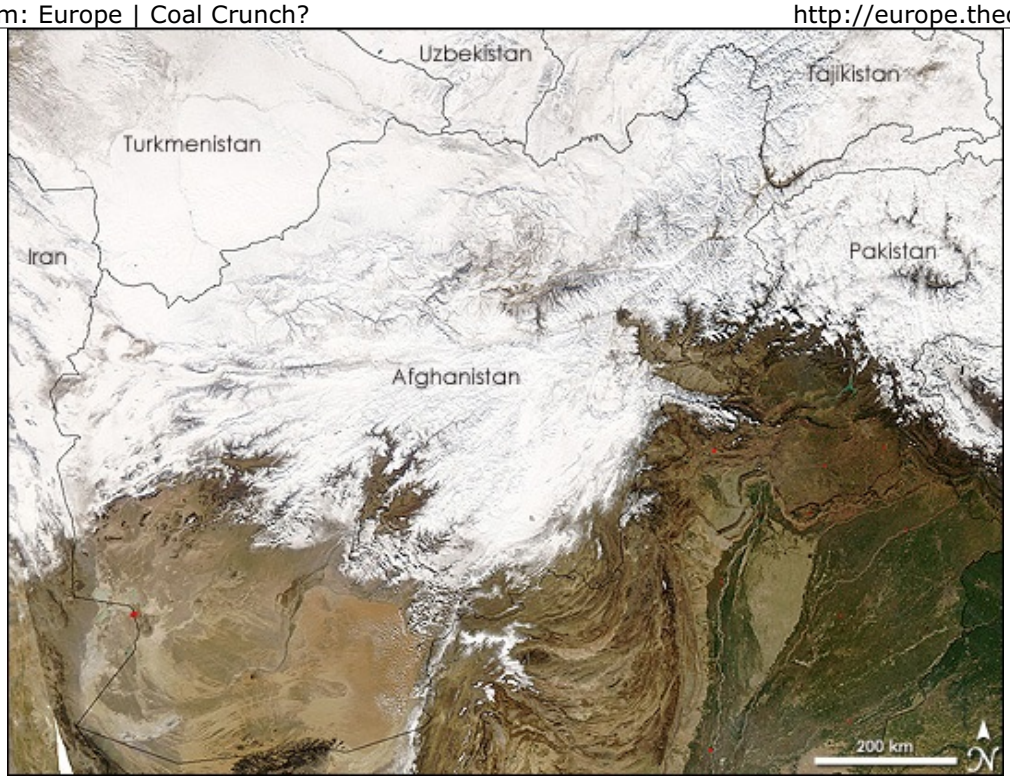
Crossposted at the European Tribune.

In the beginning of December it came to my attention that the coming Winter might be colder than usual, during the previous month the Arctic Sea Ice area grew by almost 4 million Km2, the fastest build up ever recorded. Although still 1 million Km2 below the reference average, it meant a significant temperature drop in the Arctic. During the following days temperatures in Europe drop enough to set new energy consumption records in France and Spain. December of 2007 turned out to be the coldest month since 2000.

This colder than usual winter had already been forecast by some meteorologic agencies, but in the beginning of January an extremely acute forecast by the polemic meteorologist Piers Corbyn warned of abnormally cold temperatures for central Europe. As the month draws to a close, it is clear that such forecast was correct for everywhere in the Northern Hemisphere but central Europe.

During the first week of January temperatures as low as -15ºC were felt in Greece and Bulgaria. Some days later bitter cold and snow storms reached Central Asia with Turkmenistan, Uzbekistan, Iran, Afghanistan and Pakistan being affected first. At latitudes under 40º, some places of Iran recorded temperatures of -25ºC. This would result in a series of Natural Gas supply cuts that would cascade as far as Greece, as reported earlier by Heading Out.

On the 11h of January it snowed in centre Baghdad, something that probably never happened during the XX century; during the same day it would snow in the north of Saudi Arabia. This abnormal weather has perdured across Central Asia; in Afghanistan more than 300 people have already died by cold or in consequence of avalanches. The effects of this abnormal weather can be observed in this image composed from NASA's MODIS sensor:



Source: Nasa. Click for more.

Later, colder temperatures than usual visited Siberia where the electricity grid was overloaded. Record low temperatures have been registered also in North America during this week, both in the Pacific as in the Atlantic coasts. The mercury also sank in US mainland and Canada; record snowfall hit Iowa.

In recent days this cold weather has spread to the Far East, affecting first northern India and then China. It is here that the fragility of the current energy supply system is becoming visible. Al-Jazeera reports:

> China is facing its worst-ever power shortage as winter weather puts pressure on dwindling coal supplies.
>
> Officials say reserves are down to emergency levels with only enough coal to power the entire country for another eight days.
>
> According to state media the shortage amounts to nearly 70 gigawatts, equivalent to about the entire generating capacity of the United Kingdom.

From Reuters:

> As of January 22, coal stocks in 355 power plants that depend mostly on railways for supplies had dropped to 19.68 million tonnes, approaching the "caution level" of 18.9 million tonnes, just enough for 8.8 days of generation, the report said.
>
> Coal stocks in power plants in Hubei, Guizhou, Zhejiang, Ningxia and Anhui provinces were insufficient for even three days of generation, and the number of plants with stockpiles below requirement for three days had risen to more than 60.

The Press has been pointing that this shortage is also being caused by recent government action to curb growth of illegal or unsafe mining activities. But as noted by the BBC:

> The China Business News newspaper said that 70% of all coal deliveries were made by road, and that heavy snowfall and icy conditions had contributed to supply problems.

All this is happening in a country that has 7 million Coal miners. This is an industry at a scale that probably never existed, providing 80% of the electricity consumed by 1.6 billion people, building a new coal power plant every week. And still it seems to struggle when the mercury drops.

Coal prices doubled in 2007 as China became a net importer earlier in the year. And consumption will continue rising, like Fatih Birol noted:

> By 2015, China and India will be importing 170 Mtce (million tonnes coal equivalent), and by 2030 they will be importing 330 Mtce.
>
> Before criticising these imports, we should remember that in India there are 420 million people with no access to electricity. How can we tell them not to use coal, which is the cheapest way of providing electricity?

A peak in Coal production is decades away, but this recent cold weather is showing a considerable disequilibrium between demand and supply. In the future this gap can eventually be mitigated with efficiency measures, especially at the electricity generation stage, but for now the demand growth rate, not only in China but also in India, is overwhelming.

Is this a Coal Crunch?

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