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U.K. STORAGE DEVELOPMENTS

The availability of natural gas from storage facilities adds needed flexibility to the supply system, since pipeline and LNG sources do not match up well with daily demand.

The U.K. storage system has 3 classes of storage facilities: LRS (Long Range Storage), MRS (Medium Range Storage) and SRS (Short Range Storage). Simultaneous operation of these facilities can add 120 + Mcm/d to the supply.

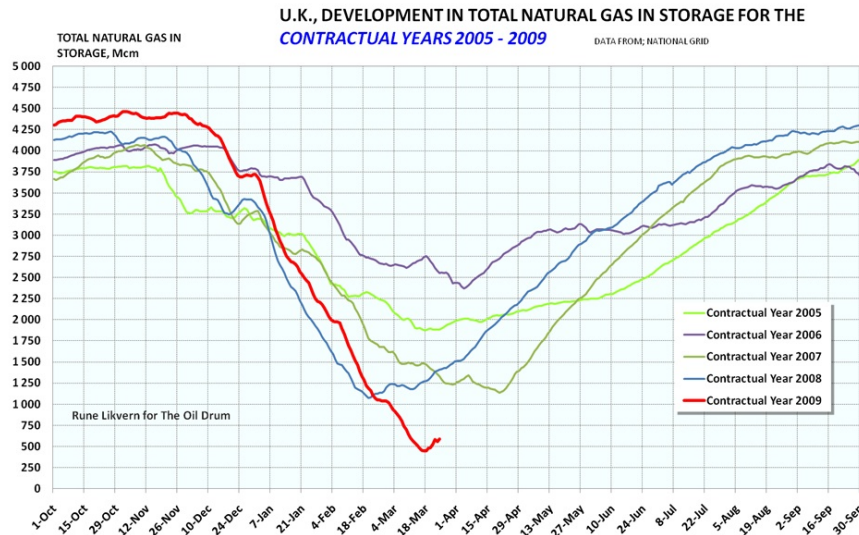


Figure 01: The diagram shows development in total working natural gas in U.K. storage for the contractual years 2005 - 2009.

For the contractual year 2009 (which started October 1st 2009 and ends October 1st 2010) increased use of storage withdrawals has been used to balance demand. At present, it looks like the minimum amount in storage will be 400 Mcm (or about 10 % of total working natural gas in storage, or about 1 day of present total U.K. consumption). This level may be tested, if there is another cold snap.

April of 2008 (Contractual Year 2007) saw a cold snap that resulted in storage withdrawals of around 200 Mcm. The most recent weather forecasts indicate colder weather than seasonal averages for early April, so this could happen again. This could call for further storage withdrawals and thus delay the start of meaningful storage injections. Right now, as documented in the diagram above, U.K. working natural gas in storage is more than 800 Mcm lower than the same time last year.

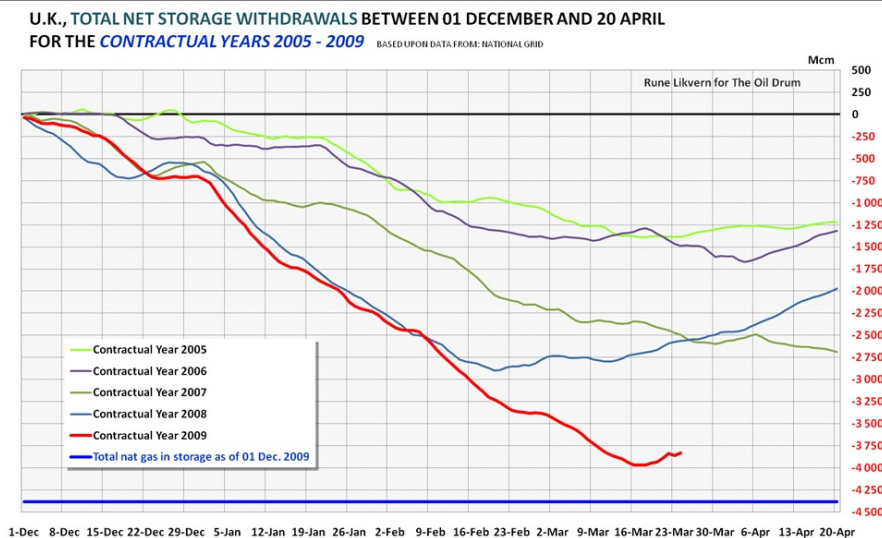


Figure 02: The diagram shows total U.K. net natural gas withdrawals between December 1st and March 31st for the contractual years 2005 - 2009.

The diagram above illustrates that the trend over the recent years have been increased use of storage withdrawals to balance U.K. demand. It should come as no surprise if U.K. total natural gas storage capacity becomes subject to more demanding tests in the near future.

Figure 02 also illustrates that between December 1st 2009 and now, net storage withdrawals have been around 1 300 Mcm higher than in the two previous years.

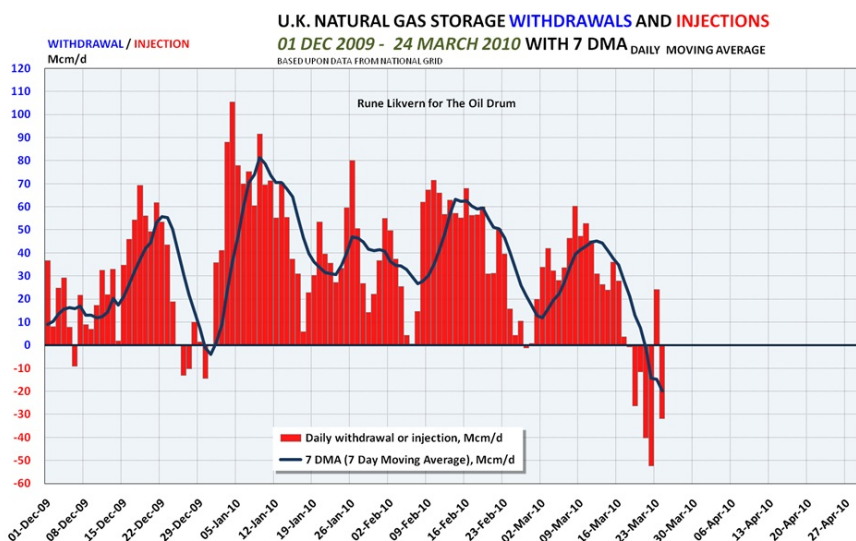


Figure 03: The diagram shows total U.K. storage withdrawals/injections between December 1st 2009 and as of now. In the diagram is also shown a 7 DMA (7 Day Moving Average).

The need for storage withdrawals seems very much to be weather driven and, as spring approaches, the need for natural gas fired heating can be expected to decline.

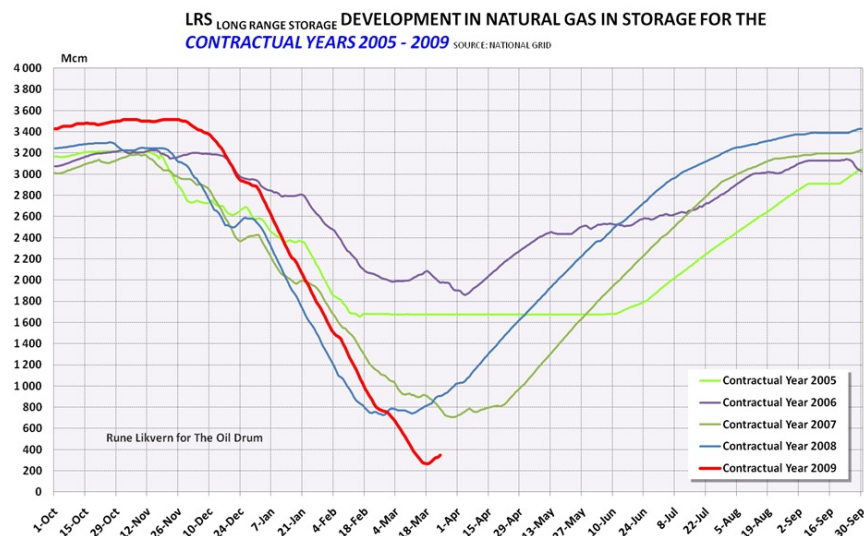


Figure 04: The diagram shows developments for natural gas in storage in LRS (Long Range Storage) for the contractual years 2005 - 2009.

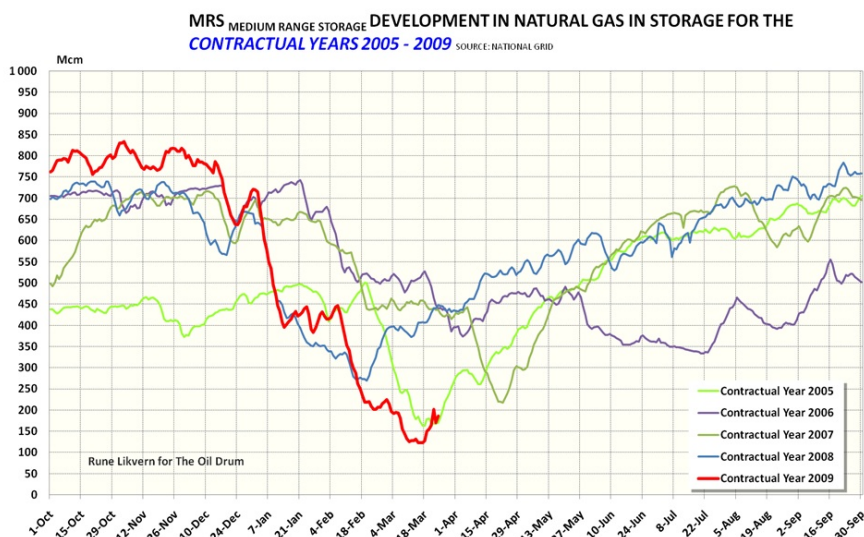


Figure 05: The diagram shows developments for natural gas in storage in MRS (Medium Range Storage) for the contractual years 2005 - 2009.

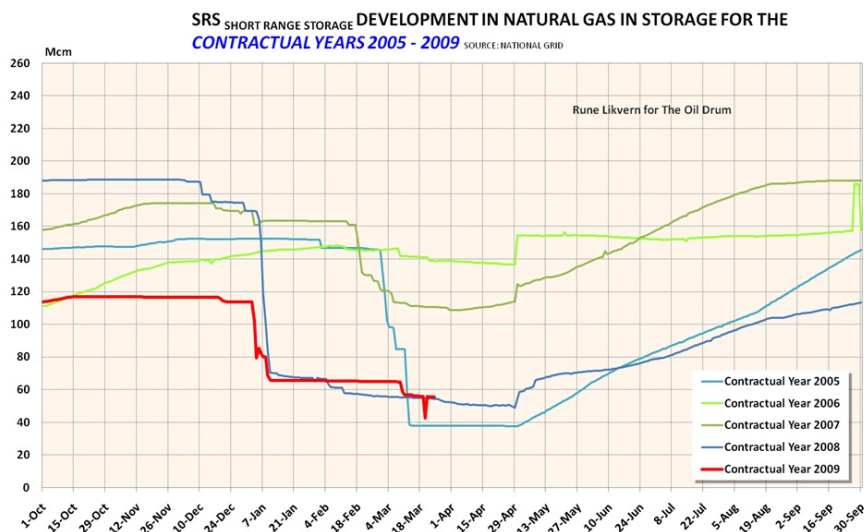


Figure 06: The diagram shows developments for natural gas in storage in SRS (Short Range Storage) for the contractual years 2005 - 2009.

STORAGE REFILLING

Most of the injection/refilling seems to happen prior to August each season. The reason for lowered injections during August and September (apart from the fact that the storage tanks are by then mostly refilled) may be that the refilling program is coordinated with the annual maintenance programs for the offshore production installations.

Earlier in the post, I mentioned that this spring/summer, U.K. storage refilling will require around 800 Mcm more natural gas relative to the two previous years and refilling will start later. This calls for higher daily injection volumes and/or an extended refilling period.

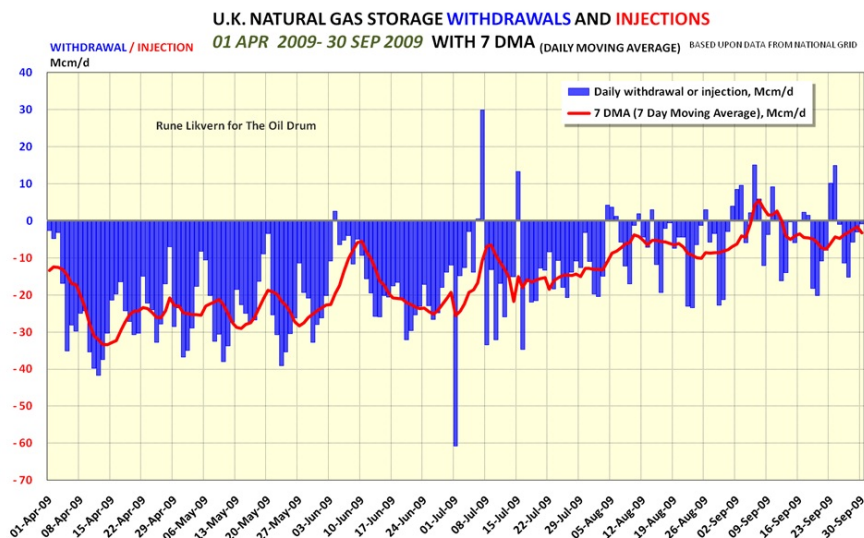


Figure 07: The diagram shows total daily natural gas injections/withdrawals during the refilling period in 2009. A 7 DMA (7 Day Moving Average) is added to smooth the data. Injections have been defined to be negative and withdrawals as positive (adds supplies).

Figure 01 (shown previously) illustrates that storage facilities have reached around 90 % filling by end of August in each of the years shown.

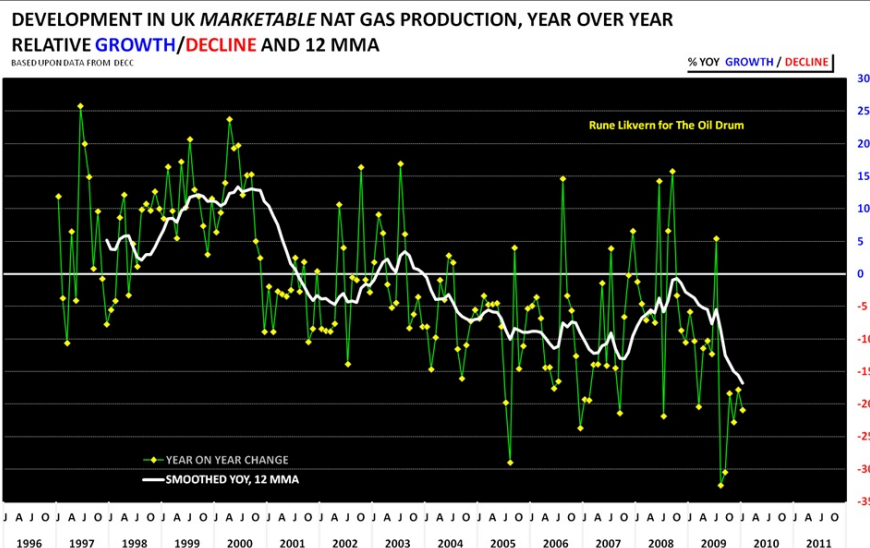


Figure 09: The diagram shows the development of the YOY (Year Over Year) decline/growth rate from January 1996 to January 2010. A smoothed 12 MMA (12 Month Moving Average; white line) has been added. The smoothed line shows how the annual decline rate has accelerated from around an annual rate of around 5 % as of July 2009 to around 17 % as of January 2010.

From January 2009 to January 2010, U.K. marketable natural gas supplies declined from 199 Mcm/d to 158 Mcm/d. The steep annual decline rate is the proverbial “elephant in the room”.

Based upon data for U.K., proven natural gas reserves as of end 2008 the R/P (Reserves divided by Production) ratio has been estimated at 4,3 as of end 2008 and as of end 2009 preliminary estimates for R/P results in a similar ratio. This suggests that annual decline rates of 15 - 20 % for U.K marketable production should be expected for the near future.

THE INTERCONNECTOR (Bacton - Zeebrugge)

Continental Europe and U.K. have mutually benefitted from the bidirectional Interconnector between Bacton and Zeebrugge. For the period 1998 to 2004, this allowed U.K. to be a net exporter of natural gas to Continental Europe. Recently the Interconnector has allowed for U.K. exports during the summer and imports during the winter as illustrated in the diagram below.

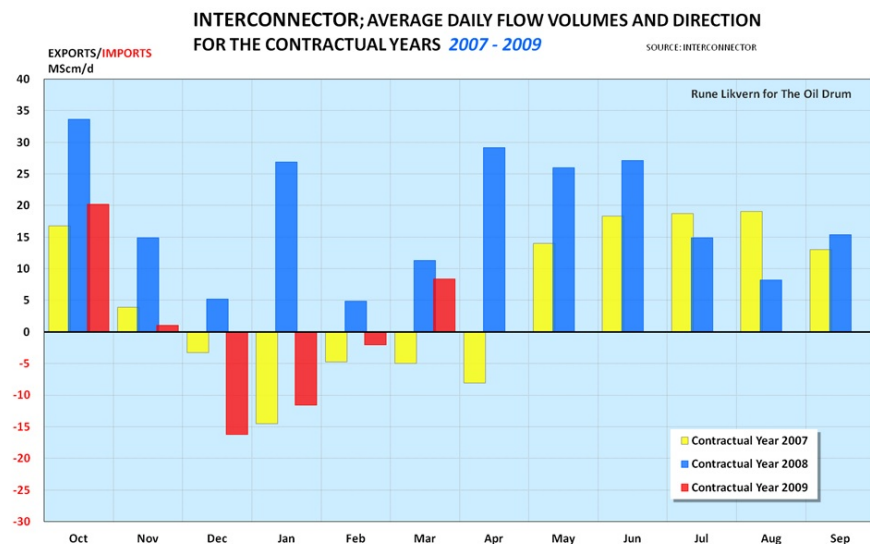


Figure 10: The figure shows, on a monthly basis, the flow direction of natural gas through the Interconnector for the Contractual Years 2007 - 2009 YTD (Year To Date).

One of the effects from the aggressive decline rates are that the flows between Continental Europe and U.K. are about to change. As the diagram above illustrates, natural gas has mainly flowed from Continental Europe to U.K. this winter. With continued decline in U.K. indigenous natural gas production, it may now be expected that the Interconnector in the near term will supply U.K. with natural gas most likely ultimately from Russia.

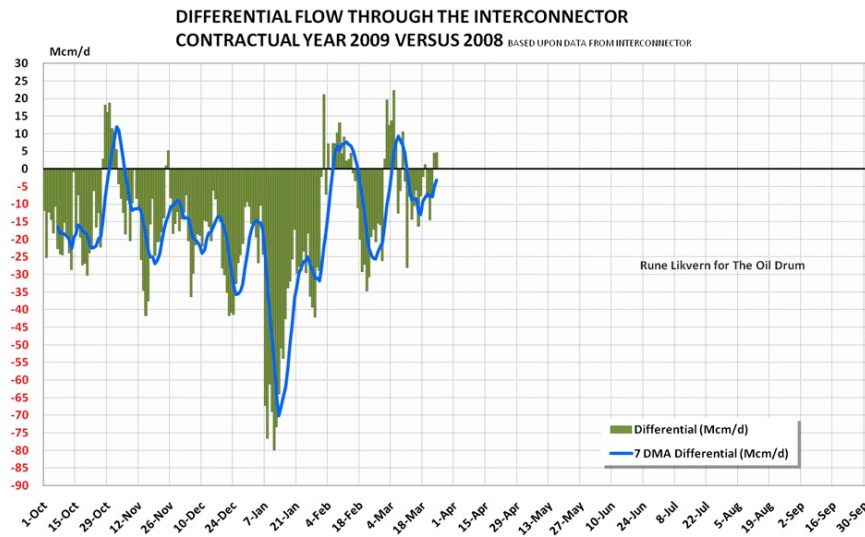


Figure 11: The diagram above illustrates how the differential flow in the Interconnector has developed from Contractual Year 2008 to Contractual year 2009 YTD. The way the diagram is to be read is that for any day, for example January 11th, U.K. imports in 2010 were 34 Mcm versus U.K. exports of 45 Mcm in 2009. This creates a differential of 80 Mcm for January 11th. One way to describe this is that Continental Europe saw around 80 Mcm less imports from U.K. on January 11th 2010 versus the same date in 2009.

So far this Contractual Year (as between October 1st 2009 and March 24th 2010), approximately 3 Gcm (Bcm) less natural gas has flowed from U.K. to Continental Europe.

Inasmuch as Continental Europe's natural gas production has been in general decline in recent years, one might expect this decline to give rise to a similar additional amount of natural gas imports, mainly from Norway and/or Russia into Continental Europe.



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