

UKCS Supplies	
Q1	<p>We welcome views on our assessment of UKCS supplies and in particular our view that for most of the winter most UKCS supplies were operating at maximum flow conditions with the exception of certain high swing supplies.</p> <p><i>Looking at beach flows over the winter this would appear to be the case, since average flows are generally close to maximum flows for each sub-terminal.</i></p>
Q15	<p>What assumptions should be made over the maximum UKCS supply availability for 2007/8, and specifically:</p> <p><i>Based on recent performance, an overall depletion in supply availability of 7% year-on-year seems reasonable.</i></p>
Q15a	<p>What assumptions should be made over the maximum UKCS supply availability from existing fields?</p> <p><i>We broadly agree with your assumptions – a fall of around 30 mcm/d looks reasonable.</i></p>
Q15b	<p>What assumption should be made over the commissioning of new UKCS developments?</p> <p><i>Again, your assumption appears reasonable.</i></p>
Q16	<p>Should we plan for a lower level of UKCS on the basis that high swing fields may not flow and consequently consider such fields on a comparable basis to storage facilities?</p> <p><i>Yes, we would expect up to 40 mcm/d of supply to be price sensitive, and hence not to flow if prices outturn at the levels observed in the latter part of winter 2006.</i></p>
Gas Imports	
Q2	<p>We welcome views on our assessment that increased Norwegian supplies to the UK were a consequence of lower supplies to the Continent.</p> <p><i>This will have been a contributing factor, however increased Norwegian production in Q4 and the additional connection to the UK will also have played their part.</i></p>
Q3	<p>We welcome views of whether Norwegian supplies to the UK and the Continent would have been higher if demand for the UK and Continent had been higher.</p>

	<p><i>We have no reason to believe Norwegian production was constrained by demand.</i></p>
Q4	<p>We welcome views on whether Norwegian supplies to the UK would have been as high if Continental demand had been higher.</p> <p><i>We have generally tended to assume that total production is fairly price insensitive at the price levels seen last winter. On this basis, any change in Continental demand would have a direct impact on flows into the UK spot market – so no, we would have expected lower UK imports if Continental demand had been higher.</i></p>
Q5	<p>We welcome views on the possible factors, other than short term market differentials, which may be driving BBL flows.</p> <p><i>Historic flows give no reason to believe that BBL responds to short-term market differentials. The supply volumes from the GasTerra-Centrica contract seem to be the only driver in BBL flow determination.</i></p>
Q6	<p>We welcome views on our suggestion that IUK operated as a marginal source of supply more akin to a storage facility.</p> <p><i>There were several points in the winter at which IUK operated as the marginal source of supply or demand. Comparing IUK flows with those from Rough shows a reasonable correlation.</i></p>
Q17	<p>What assumptions should be made for levels of imported gas from Norway for winter 2007/8 through Langeled and Vesterled?</p> <p><i>We expect Norwegian production to increase year-on-year. It seems reasonable, bearing in mind pipeline constraints, to assume that some of this increase will flow to the UK.</i></p>
Q18	<p>Should we be making any allowance for additional Norwegian imports through the Tamen Link?</p> <p><i>Tamen Link would likely account for some of the anticipated increase mentioned in response to Q17.</i></p>

Q19	<p>What assumptions should be made for levels of imported gas through BBL for winter 2007/8, and specifically:</p> <p><i>We expect a similar profile to last winter, although if NBP trades significantly higher than TTF there may be up to 8 mcm/d extra due to pipeline capacity being made available to 3rd parties.</i></p>
Q19a	<p>Q19a. Should we assume a uniform supply profile throughout the winter period?</p> <p><i>Based on last year's profile, yes.</i></p>
Q20	<p>What assumptions should be made for levels of imported gas through IUK for winter 2007/8, and specifically:</p> <p><i>We expect a similar flow profile to last winter, with the IUK acting as the marginal source of supply during high price periods competing with storage withdrawals in the UK. From the outset it seems less likely that we will see a repeat of winter 2005/2006 when supplies through the IUK had some element of interruptibility in the face of very high demand on the continent.</i></p>
Q20a	<p>Should we assume that the IUK will operate as a marginal source of supply when UKCS and other imports cannot meet UK demand?</p> <p><i>Yes, along with storage withdrawal.</i></p>
Q20b	<p>Should we assume that the availability of gas through IUK will increase as the certainty regarding the availability of Continental storage to meet the remainder of the winter improves?</p> <p><i>This seems a reasonable premise, however the same argument could be applied to winter 2006/7, in which we saw imports fall towards the end of the winter despite high certainty about above-average storage stocks.</i></p>
LNG Imports	
Q7	<p>How sensitive to gas price are LNG deliveries?</p> <p><i>At the Isle of Grain deliveries appear to be reasonably</i></p>

	<i>sensitive to price differentials between the UK and US gas markets, albeit with a significant lag between prices inverting and deliveries being diverted. The lack of deliveries to Teesport shows that this terminal is highly sensitive to Atlantic price differentials.</i>
Q8	<p>How developed is a global gas market for LNG?</p> <p><i>In terms of spot flexibility, the market is developing as more flexible contract structures are introduced and regasification capacity is expanded. Over the past winter there do appear to have been some restrictions on diversions between trading hubs as some deliveries have ignored larger netbacks in alternative markets, possibly due to restrictions on regas capacity. However significant volumes have been diverted in recent months, albeit with a lag to the development of the price incentives.</i></p>
Q21	<p>What assumptions should be made for levels of imported LNG through Grain, Teesside and Milford Haven for winter 2007/8?</p> <p><i>At current forward curve levels we would expect to see maximum utilisation of Grain and Teesside from December to February. However if large gas volumes are imported from Norway we would expect the forward price differential to disappear and hence for LNG imports to be potentially very low.</i></p>
Storage	
Q9	<p>With a back-drop of declining gas prices as the winter progressed, what were the key drivers for increased storage use later on in the winter?</p> <p><i>In early winter the forward curve, whilst softening, remained in contango hence preserving the incentive to leave gas in storage. Increasing certainty about the supply and price situation later in the winter will also have encouraged withdrawal later, rather than earlier in the season.</i></p>
Q10	<p>Under conditions of increased demand, would storage cycling be so prominent?</p> <p><i>Storage cycling is not linked to demand levels but to the relative price differentials along the forward curve. A shift from backwardation to contango stops withdrawals and encourages injections. The opposite structural shift – contango into backwardation –</i></p>

	<i>triggers storage withdrawals.</i>
Q22	<p>We would welcome views on our assumed levels of storage space and deliverability.</p> <p><i>The assumptions in the initial view are consistent with the information we have.</i></p>
Q23	<p>We would welcome views on the extra storage space that could be made available through storage cycling.</p> <p><i>Optimisation of storage capacity against prompt prices should allow capacity holders to maximise storage capacity. All things being equal, price volatility could be suppressed by the additional storage capacity available this winter.</i></p>
Gas Supplies	
Q24	<p>We would welcome views on our 2007/8 Initial View, and specifically:</p> <p><i>NG's view is broadly consistent with our own.</i></p>
Q24a	<p>Whether it is plausible that the supply availability could be so much higher than for last winter?</p> <p><i>Given the new import infrastructure which will be available from the beginning of winter 2007/8, together with commencement of production from the Ormen Lange field this seems entirely plausible.</i></p>
Q24b	<p>If the supply position does improve as suggested, what will become the order of supplies at lower levels of demand?</p> <p><i>Our understanding is that Norwegian production costs are below those for many UKCS fields. Given the seeming inflexibility of imports via the BBL, we would expect IUK imports, storage flows and CCGT demand to provide flexibility to the market.</i></p>
Gas Demand	
Q11	<p>How will domestic prices change from this winter to next and what impact will prices and energy efficiency considerations have on demand?</p> <p><i>It is difficult to clearly quantify the price elasticity of demand, since the dataset for multiple regression against price and temperature is limited, and non half hourly/daily metering for electricity/gas does not</i></p>

	<p><i>provide the data for small consumers at adequate resolution. Over the last winter period we have seen a reduction in large industrial demand as a direct result of price increases but less so in the domestic sector.</i></p> <p><i>The unusual warmth of the 2006/7 winter has made it difficult to quantify the respective effects of high prices, energy efficiency improvements and warmer temperatures in the reduction of domestic demand over the last year</i></p> <p><i>The GDP growth assumptions made by National Grid in the 7 Year Statement suggest that while oil and gas prices are expected to fall over the coming period, the base forecast shows annual electricity requirements rising at an average growth of 0.6% per annum, although this seems at odds with the year ahead forecasts from National Grid. We do not second guess GDP growth forecasts, and energy intensity is impacted by industrial trends as well as energy efficiency.</i></p> <p><i>Retail prices smooth the variations in wholesale prices, with both leading and lagging relationships.</i></p>
Q12	<p>If prices fall, will lower prices lead to the return of demand lost due to changes in customer behaviour, for example thermostat settings?</p> <p><i>It is difficult to tell whether demand lost will return if prices fall, as there are minimal data available, however, in terms of domestic usage, broadly speaking we would expect less customers to set their thermostat higher as a result of low prices than there are those who would reduce the setting as a result of higher prices, and as such we would not expect all of the demand lost to return.</i></p> <p><i>Similarly we have seen a significant reduction in large industrial demand, as industrial processes have been moved out of the country that we would not expect to return.</i></p>
Q13	<p>2006/7 saw lower wholesale prices than forecast and as a result higher power generation demand i.e. some positive demand response. To what extent will prices change over winter 2007/8 compared to 2006/7?</p> <p><i>At this stage prices for the forthcoming winter are lower than at this time last year. Given the improved supply situation in your initial view this feature would be expected to persist.</i></p>
Q14	<p>In developing our updated view for 2007/8 which basis should we assume going forward i.e. unrestricted (traditional demand profile) or restricted</p>

	<p>(high priced profile) or should we assume some other growth profile?</p> <p><i>A traditional demand profile would seem appropriate due to the lower level of the forward curve for this winter compared to last.</i></p>
Electricity Demand	
Q25	<p>We would welcome views on the reasons why the weather-corrected operationally metered generation fell during 2006/7 and whether demand might be expected to decline further, remain at current levels or resume its trend of growing at 1-1.5% pa.</p> <p><i>Following the very high gas and power prices seen during the previous winter and also in the summer, the issue of energy affordability was towards the forefront of public awareness. This, coupled with high profile concern over global warming and the need to reduce CO2 emissions, may have led to this reduction in electricity consumption, with the relatively mildness of the winter assisting in this.</i></p> <p><i>Electricity demand in the future is likely to remain linked to overall economic development (GDP growth), but with energy efficiency playing an increasing role. However, it is likely that efficiency measures (e.g. energy efficient light bulbs, insulation, etc) will take time to achieve significant levels of market penetration, and hence in the short term demand may be expected to continue to grow at levels close to - but perhaps slightly below - its historic trend (assuming the economy as a whole does so).</i></p>
Q26	<p>We would welcome views on the extent to which electricity demand response at peak times might be expected to continue.</p> <p><i>Under existing supplier volume allocation arrangements, only large sites with half hourly meters can respond to price signals. For this consumer group the price needs to be very high for the benefit of demand reduction to outweigh the loss of production. In general we expect demand response capability and behaviour to increase on a continuous basis, with the actual response being dependent on the respective levels of base load and on the peak/off peak differential. Peak demand response will increase with consumer displays and smart metering technology facilitating multi-rate tariffs, real time tariffs, and enhanced supplier volume allocation. Customer segmentation would potentially allow any vulnerable</i></p>

	<i>customers to be protected by specific tariffs or products.</i>
Electricity Supply	
Q27	<p>What assumptions should be made to the extent to which generation will continue to be available, i.e. will any plant currently available subsequently be mothballed for winter 2007/8?</p> <p><i>The availability of plant will be governed by market principles, if it is economic for units to do so they will generate. It would seem unlikely that plant which is currently economical to run would become uneconomical to run for winter 2007/08</i></p>
Q28	<p>To what extent is there scope for long-term mothballed plant to return to service prior to the 2007/8 winter?</p> <p><i>Given the lead time required to demothball, the comfortable projected margins and the resulting power prices, it would seem unlikely that any significant volumes of mothballed plant would return for the start of this winter.</i></p>
Q29	<p>What assumptions should be made over the availability of different classes of generating plant, and in particular nuclear plant?</p> <p><i>We do not see any reasons to differ significantly from the views expressed by National Grid. With regards to nuclear plants, the nuclear generators will be better placed to answer this question.</i></p>
Q30	<p>What assumptions should be made over the level and direction of flow on the UK-France Interconnector given cold weather in both UK and Europe?</p> <p><i>It must be assumed that the France-UK interconnector flows will be a function of the relative price levels in the two markets. We would expect to see the size and direction of flow respond to prices subject to the market timescales for making renominations to interconnector flows. Clearly any tightness of the market in the UK is likely to lead to higher prices and so will maximise the chances of importing.</i></p>
Q31	<p>We would welcome views on the ability of the electricity market to deliver in practice the level of CCGT response that our analysis suggests might be theoretically achievable in a severe winter, and in particular on:</p>

	<p><i>The last few winters have demonstrated the ability of CCGT's to respond quickly & reliably to changes under, sometimes extreme, market conditions. We believe that as long as the signals are clear in the UK and continental power, gas, coal, carbon, HFO & distillate markets, then the CCGT's will respond accordingly.</i></p> <p><i>Last winter's CCGT generation was significantly higher than the year before due to the low gas prices seen after the flow of gas through the Langeled and BBL lines commenced. However we believe that NGC's assumptions on the potential response are reasonable. The use of that response is clearly dependent on relative prices and so on the reliability of nuclear and coal-fired plant.</i></p>
Q31a	<p>Our assumptions relating to the generation running order under cold weather conditions and the associated availability factors</p> <p><i>Last winter's very low gas prices meant that we did not see the flexing of CCGTs which we had seen in previous years, however, at times of very high gas price, oil-fired plant will run ahead of gas for an extended day-time period.</i></p>
Q31b	<p>The extent to which relative market prices will signal the requirement for CCGTs to continue to burn gas at peak electricity demand periods</p> <p>See Q31</p>
Q31c	<p>The ability and willingness of CCGT generators to switch to distillate</p> <p><i>There is clear evidence of CCGT's switching to distillate by comparing power generation and gas take, assuming that significant differences between the two must be caused by distillate switching. We believe generators will be willing to switch to distillate when dictated by market prices</i></p> <p><i>However, the risk of distillate switching at a time when market prices are likely to be high will mean that generators add a, potentially high, risk premium to the cost of switching. This premium reflects the direct</i></p>

	<p><i>costs and the reliability risk from switching.</i></p> <p><i>We have no evidence that would lead to a different assumption than that made by NG.</i></p>
Q31e	<p>The ability and willingness of the market to replace gas-fired generation by coal and oil fired generation</p> <p><i>This worked well historically and can be expected to do so again. It is not a question of willingness but simply a matter of price differentials. As mentioned previously, the reason for the lack of generation switching in Winter 06/07 as compared to previous years was due to the continued low gas prices and decrease frequency of occasions in which switching was economic.</i></p>
31g	<p>How the level of CCGT response may compare with that experienced in 2006/7.</p> <p><i>This will be purely driven by the relative marginal costs of generation by different fuel types, the higher the gas price relative to that of other fuels the greater the response will be, as demonstrated historically.</i></p>