Modification Proposal 727:
Publication of Near Real Time Data at UK Sub-Terminals
Representation by Barclays Capital
1 March 2005

Barclays Capital strongly supports the proposal for modification 727 from energywatch. The availability of transparent, reliable information on the fundamentals of supply and demand is a key requirement for the development of an efficient, competitive and liquid market. Transparent information on production capability, output and demand and the state of delivery networks is essential for market participants to form a view on the likely future direction of market prices and access to detailed production and demand information both real-time and after the event is crucial in allowing traders to understand how prices respond to underlying changes in the supply and demand balance. Given that the UK electricity market provides an international benchmark in levels of transparency, the continuing paucity of basic production information in the UK gas market is an ongoing source of disappointment and frustration. This opacity undermines competition and liquidity as market participants are increasingly unwilling to risk their capital on unstable, unpredictable, rumour-driven prices.

As we outlined in our December 2003 paper on greater transparency in the UK gas market (attached), this lack of transparency costs UK gas consumers upwards of £265 million per year. This represents a highly-conservative estimate of the likely true cost to consumers given that many highly significant benefits were not quantified. Moreover, the analysis focuses solely on the gas market and takes no account of the associated negative impact on liquidity in the electricity and emissions markets, for which the price of gas remains a key driver. While these estimates related to the provision of information generally, they are directly relevant to the consideration of Modification 727. We do not intend to repeat here arguments relating to the value of greater information release. Our December 2003 paper on this topic can, however, be treated as part of this representation and we would also like to record our complete agreement with the compelling analysis provided in the energywatch Additional Information Paper which is appended to the Draft Modification Report (DMR). In the following, we confine our comments to the specific issues raised by the modification proposal namely:

- The need for disaggregated sub-terminal data;
- Publication of Third-Party Data;
- Accuracy of Information;

We address these issues in the sections below.

The Need for Disaggregated Sub-Terminal Data

While we welcome the provision of aggregated near real-time information stemming from the DTI's information initiative, it will still provide only a partial view of evolving production capability and flows. Terminal level data is essential if all market participants are to see the "real picture" of evolving supply and demand including information on the breakdown of the supply stack rather than just aggregate supplies. Without more detailed information – broken out the sub-terminal level – market participants will still need to speculate on the likely cause of any changes in production and rumours, rather than facts, will still play a key role in the determination of prices.

The analogy with the power sector is directly relevant here, where the real-time information provided on physical notifications and maximum export limits provides the market with real-time information not just about the aggregate unexpected supply loss, but the power station affected. The identity of the power station, its geographic location and position in the supply stack is crucial information in working out the likely impact on prices following the loss. An aggregate figure

without this level of detail, would only allow traders to draw broad, and potentially inaccurate, conclusions on the likely impact on electricity prices.

Finally, we would challenge the prevailing assumption that it is necessary to aggregate the data to protect the commercial interests of producers. This begs two major questions namely:

- **Disaggregated data would damage the commercial interests of producers.** There is not an immutable link between production events and terminal flow data: production problems do not always alter flows; flows may change without production events; and offshore contractual flexibility between producers serves to obscure the commercial breakdown of any particular flow figure. The flow data would therefore only reveal information on actual gas flows and hence would not directly reveal the commercial arrangements lying behind each terminal and hence the commercial position of each producer.
- **Producers' interests should be protected at the expense of consumers.** Even if disaggregated terminal flow information has a commercial value to producers, it does not follow that the market should not see that data at the same time. Trading is a "zero-sum" game; if one party gains from buying in advance of a supply shortage and associated rise in market prices, then, by definition, the selling party must lose the same amount. If the status quo was to release disaggregated data, would anyone seriously entertain a move back to a situation where producers get to buy gas based on asymmetric access to more-detailed information in advance of a market response to a supply shortfall? In this regard, it is instructive that, in 15 years, no attempt has been made to re-aggregate information in the UK electricity sector to protect the position of generators largely, one suspects, because it would be difficult to mount a credible case for such a change.

Publication of Third-Party Data

Transco's DMR suggests that releasing sub-terminal data would place it in breach of "various statutory and legal obligations". This appears to represent a highly conservative conclusion given the specific issues raised in the DMR. Although the discussion of these issues in the DMR is somewhat confused, the arguments presented lead us to draw the opposite conclusion, ie, that it appears highly likely that Transco would not breach any statutory or licence conditions were it to release real-time terminal flow information.

The energywatch modification would result in a Network Code obligation on Transco to release the flow data. As Transco recognise in the DMR "where Transco is required to disclose information pursuant to the Network Code, it would not be liable under section 105" although this absence of liability may "not extend to any contractual liabilities that Transco may have under any Network Entry Agreements or Confidentiality Agreements". Although we have no information on the precise terms of the NEAs and confidentiality agreements, it seems reasonable to suppose that:

- Transco's bilateral contractual arrangements are likely to include provisions that deal with changes in the respective obligations of the parties under the Network Code and other licence-related provisions. Hence a contractual route would be available to amend these agreements to make them consistent with an obligation to release sub-terminal information; and
- Even if the contracts did not already provide for this contingency, an obligation under the Network Code would override any bilateral contractual obligations which in turn should precipitate the renegotiation of these agreements. (If this was not the case, presumably any agreed change to the Network Code could in theory be forestalled by the provisions of the NEAs and confidentiality agreements.)

There is therefore little reason to suppose that Transco would actually be in breach of section 105 if it released the sub-terminal information nor that such an obligation would create insoluble difficulties for other related contracts.

The disapplication of section 105 with respect to an obligation to publish the information renders much of the discussion in the DMR about the precise ownership of the original metered data redundant. However, with respect to the ownership of the data, Transco separately considers data obtained through its own meters (including the potential installation of duplicate meters) and that obtained from meters owned by the Delivery Facility Operators (DFOs).

With respect to data from their own meters, the view that Transco-owned data would still be covered by section 105 appears highly questionable. To what extent would Transco have "obtained" information "under or by virtue of" the provisions of the relevant acts in the case of its own data? There also seems a direct parallel here with the possibility of obtaining data on deliveries in any other market. For example, it would be open to anyone to monitor and report on publicly observable deliveries through a port or rail terminal or into or out of a particular factory, coal mine, refinery etc. Although the monitoring method may differ there seems little substantive difference between such activities and the reporting of terminal flow data collected by Transco from its own meters. There is an even more direct parallel in the electricity market, where flow information obtained via third-party remote monitoring of flows at key points on the electricity network is available to market participants as a commercial information service (and independently of system operators and meter owners).

As discussed above, Section 105 would not prevent Transco from publishing the terminal flow data received from the DFOs if required to do so by the Network Code. Of more concern is the threat that the upstream parties may no longer provide this information if it were required to be released. The mere fact that such a threat could be made or implied, only serves to further demonstrate the strength of the view that this data which should be shared equally with the whole market. The withdrawal of this data by the upstream parties would be a highly retrograde step and we would be surprised if upstream parties actually chose to adopt such an irresponsible course. Nevertheless, the mere possibility that upstream parties could hold Transco to ransom in this fashion provides a *prima facie* case for introducing statutory and licence provisions to ensure the continued availability of this information to Transco. This would seem to be a more pragmatic step than the installation of duplicate metering, although a commitment by Transco to install duplicate metering, and to publishing the information obtained, may provide some useful leverage in getting the upstream parties to regularise the provision of this information to Transco.

Finally, Section 2 of the DMR references Standard Condition 39 of Transco's Gas Transporter Licence as one of the statutory and legal obligations that it might breach in releasing this information. This reference is not elaborated further in the DMR and, given that the condition's primary purpose relates to sharing of information between affiliated businesses of the Transporter, it appears to have little substance or relevance.

Accuracy of Information

While we take some comfort from the DTI and Transco maternalistic view that *"immediate but inaccurate information is less useful to the market than less rapid but accurate information"*, we would rather have potentially inaccurate, but prompt and disaggregated, sub-terminal information than rely on delayed and aggregated information alone. Moreover, there seems no inherent reason why information released "near to real-time" cannot be progressively updated and refined with the passage of time to give the market the opportunity to choose which data they rely on in their decision making rather than have that choice removed from us. While data accuracy is clearly a concern, we would note that the data is sufficiently useful to allow Transco to manage its system and it seems reasonable to assume that market participants would prove equally capable of interpreting the data in making their own decisions.

Benefits from Greater Information Release in the UK Gas Market
Barclays Capital
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The DTI is currently undertaking a detailed assessment of the costs and benefits of greater information release in the UK gas sector. To date we understand that other market participants have largely focused on the costs of greater information release in their discussions with the DTI and that there is a degree of scepticism about the likely benefits. This is natural in any cost-benefit analysis of a proposed policy change since the costs are likely to be more tangible and measurable than the benefits. However, the fact that the benefits of greater information release are less tangible and more difficult to measure than the costs, should not obscure the fact that the benefits are likely to exceed the costs by an order of magnitude.

The additional costs associated with collating and publishing greater physical information on the UK gas sector are likely to be relatively modest. Much of the data required is already collected by producers for planning purposes, used in current billing cycles or is already available to Transco. Against these costs, the release of fundamental physical production information offers the following benefits to UK gas consumers:

- Greater competition and efficiency in production, consumption and storage decisions stemming from more efficient markets signals and reduced barriers to entry with increased liquidity in the wholesale market;
- More efficient maintenance with improved price signals to producers on the most optimal time to take maintenance outages;
- Reduced wholesale risk management costs stemming from improved liquidity;
- Improved investment signals and greater security of supply as more liquid forward markets improve the ability of the market to react and adjust to emerging supply shortfalls;
- Reduced balancing costs faced by Transco and consumers stemming from the price better reflecting underlying supply and demand fundamentals; and
- The benefit to consumers of reducing the commercial value of privately held information to producers.

The following sections discuss the likely size of these benefits. Overall, we estimate that the benefit of greater information release is likely to be upwards of £265 million per year. This is a conservative estimate and we believe that this is likely to exceed any additional costs by an order of magnitude.

Benefit from Increased Competition in Production and Supply - £45 million/year

In their joint Regulatory Impact Assessment of the introduction of the British Electricity Trading and Transmission Arrangements (BETTA)[1], Ofgem and the DTI estimate that the increased competition resulting from BETTA would lead to final prices to consumers being 0.5 per cent lower than they would otherwise be. Competition in generation and supply already exists in Scotland and this is therefore a cautious estimate of a limited incremental improvement in competition in Scotland stemming from the changes to the balancing and settlement arrangements.

The release of greater information in the UK gas sector would have a much more profound effect on competition in production and supply than the extension of the England and Wales balancing arrangements to Scotland. Better market price signals – based on supply and demand fundamentals, rather than rumour and suspicion - should lead to significant efficiency gains stemming from better optimisation of individual production (and consumption) decisions and greater competition to flow gas at the margins. Greater transparency and liquidity should also encourage the entry of new market participants. We would therefore expect the benefits of

[1] http://www.dti.gov.uk/energy/domestic_markets/electricity_trading/ria.pdf

greater information release in the UK gas sector to exceed the likely benefits from BETTA. The DTI's estimate of a cost improvement equivalent to 0.5 per cent of retail prices therefore provides a very cautious proxy for the likely benefits stemming from greater information release in the UK gas market. With NTS throughput of around 40 billion therms per year and a retail price of around 23p/therm[2], the total value of throughput in the UK gas sector is in the region of £9 billion. This would give a total benefit from improved competition following greater information release of £45 million per year.

Benefit from Better Coordination of Outages = £20 million/year

Better information disclosure on planned outages would lead to better coordination of outage plans and a consequent reduction in costs to consumers, ie, instead of two outages (one linked to production and the other linked to transportation), the system as a whole would face a single outage. Consider the following example (which is broadly based on our analysis of an outage earlier this year):

- a single offshore maintenance outage is expected to reduce flows in the order of 2 million therms per day for six weeks.
- Transco has maintenance at the same terminal planned for three weeks later in the year. This outage could have been taken at the same time as the six week outage had Transco had sufficient information on the producer's outage plans to be able to coordinate the outages and hence minimise the combined impact on consumers.

We estimate that prices increase by around 0.3 p/therm per million therms of supply withdrawn from the system. (We base this on the spread between weekend and weekday prices where the price differential averages 1.9 p/therm for an average demand differential of 6.7 million therms.) Applying this price effect to the Transco outage of 2 million therms, would give a price change of 0.6 pence/therm for the 21 days of the Transco outage. With demand of say, 80 million therms per day, this would give a total cost to consumers of around £10 million for this one instance of uncoordinated outages. If we conservatively assume that there is the equivalent of two such events per year, the cost to consumers of failing to coordinate maintenance outages is £20 million per year.

Benefit from More Efficient Risk Management = £200 million per year

The spread between buy and sell prices in the wholesale gas market is a measure of the efficiency of the wholesale market, since its represents the "premium" paid by market participants to hedge their deliveries and offtakes in order to stabilise their cash-flows. Highly liquid and efficient markets have very low spreads. However, market spreads increase significantly when market participants face unmanageable and unknown risks, eg, those risks stemming from the exercise of market power or asymmetric access to fundamental supply and demand information. In these circumstances, the spread has to be higher to compensate market participants for the increased trading risks that they bear.

The bid-offer spread in the UK gas market currently varies between around 0.10p/therm to 0.2p/therm. The higher spreads and lower liquidity result when there is significant uncertainty on fundamental supply and demand conditions. We would therefore estimate that the release of greater market information could, on average, reduce market spreads by around 0.05p/therm by bringing the spreads at less liquid times down to a similar level to the premiums observed when the market is working well. On traded volumes of around 400 billion therms (roughly ten times

[2]This figure is derived from the "All Consumers" average from Table 3.14 "Prices of Fuels Purchase by Manufacturing Industry: Excluding the Climate Change Levy", Table 3.1.4 of "Quarterly Energy Prices", DTI, June 2003.

physical deliveries of around 40 billion therms), this would equate to a reduction of the risk management premiums faced in the UK gas industry in the order of £200 million.

Improved Security of Supply - Not Assessed

Greater information availability improves market prices signals and thereby enables producers, consumers and Transco to respond more readily to emerging supply shortfalls. This should improve security and ultimately reduce the incidence of demand interruptions. While the specific circumstances surround the recent summer interruptions relate largely to locational issues on the NTS, earlier information on likely problems would have allowed customers to respond more readily to the likelihood of interruptions by arranging for back-up fuels, taking maintenance outages or rescheduling production. In the event, significant interruptions to supply took place with a costly impact on the customers concerned. Greater release of advance information would have reduced and ameliorated these supply interruptions. More generally, advance information on maintenance and supply interruptions allows the market to provide forward price signals that yield physical responses from customers, interconnector shippers, producers etc. Attaching a figure to reduced interruptions is difficult since it requires an assessment of the opportunity cost of production and the opportunities for fuel substitution. Nevertheless, we would expect the contribution of greater information release to security of supply to be large.

Reduction in Balancing Costs – Not Assessed

Better information should significantly improve the ability of Transco to manage the system. This should lead to a reduction in the costs of system balancing. The interaction of Transco's incentives schemes and the Network Code balancing rules make it difficult to assess the overall balancing costs currently borne by consumers. This makes it difficult to estimate the reduction in balancing costs likely to stem from greater information release. Nevertheless, we would expect this benefit to be significant and would suggest that the DTI consult with Ofgem and Transco to assess the likely magnitude of this benefit.

Transferring the Commercial Value of Information to Consumers – Not Assessed

The above sections have highlighted significant benefits to consumers stemming from the reduction in the underlying costs of production, supply and risk management. In addition, we understand that the DTI's investigation of the cost of information release includes the costs "associated with commercial sensitivity and confidentiality". We are not entirely clear what the source for these costs is, which makes it difficult to assess whether these are genuine costs or to estimate their likely impact. For example, while the release of *company-specific* position information could conceivably damage competition and impose costs on consumers, such costs are unlikely to stem from the release of ante data which is aggregated by sub-terminal or for disaggregated ex post data (which cannot impose additional costs associated with confidentiality since it relates to events which have passed). Moreover, it is possible that these "costs" actually relate to the value to producers of the advantage they enjoy from asymmetric access to fundamental production information. In this case, far from being a "cost" imposed on producers by greater information release, these "costs" would represent a benefit to consumers (ie, information release would transfer the value of private information from producers to consumers).

In this area, we would therefore recommend a careful examination of the claimed costs "associated with commercial sensitivity and confidentiality" since it seems at least possible that the form of information release will not actually impose such costs or, indeed, that the "cost" to producers could also be seen as a benefit to consumers.