Direct Dial: 020-7901 7412
09 September 2002

The National Grid Company, BSC Signatories and
Other Interested Parties

Your Ref:
Our Ref: MP No: P74

Dear Colleague

**Modification to the Balancing and Settlement Code ("BSC") - Decision and Notice in relation to Modification Proposal P74: "Single Cost-Reflective Cash-out Price"**

The Gas and Electricity Markets Authority (the "Authority") has carefully considered the issues raised in the Modification Report[1] in respect of Modification Proposal P74 "Single Cost-Reflective Cash-out Price".

The BSC Panel (the "Panel") recommended to the Authority that Alternative Modification Proposal P74 should be made. The Panel recommended that Alternative Modification Proposal P74 should have an Implementation Date of 25 February 2003 where an Authority decision is received by 6 September 2002. Where an Authority decision is received after this date, but before 19 February 2003, the Panel recommended that the Implementation Date should be 24 June 2003.

The Panel recommended that the Authority should reject Proposed Modification P74. However, if the Authority determines that the Proposed Modification should be made, the Panel recommended that the Implementation Date should be 25 February 2003 if an Authority decision is received by 6 September 2002. Where an Authority decision is made after 6 September 2002 but before 12 March 2003 the Panel recommended that the Implementation Date should be 24 June 2003.

The Authority has decided not to direct a modification to the BSC.

[1] ELEXON document reference P074RR, Version No. 1, dated 16 August 2002.

This letter explains the background to the Modification Proposal and sets out the Authority's reasons for its decision.

**Background to the proposal**

The Balancing Mechanism was designed to enable NGC, amongst other things, as the System Operator ("SO"), to keep the transmission system (the "System") in Electricity Balance close to, and in, real time by adjusting levels of generation and demand in the light of the Bids and Offers submitted. The SO also uses the Balancing Mechanism to ensure that the System remains within safe operating limits[2] and that the pattern of generation and demand is consistent with any System transmission constraints. NGC, as SO, therefore incurs costs which can be divided between costs associated with "Electricity Balancing" and "System Balancing".

NGC can contract ahead of Gate Closure[3] for the provision of balancing services where it is efficient and economic to do so. NGC is required to procure any balancing service contracts competitively via transparent processes. Therefore, NGC is required under special condition AA4 of its Transmission Licence to have in place Procurement Guidelines ("PGs") and a Balancing Principles Statement ("BPS"). The PGs outline the sort of balancing services that NGC may be interested in purchasing, together with the mechanisms envisaged for purchasing such balancing services. The PGs additionally state that NGC is prohibited from trading speculatively. The BPS defines the broad principles and criteria by which NGC will determine, at different times and in different circumstances, which balancing services will be used to assist in the operation of the System.

Gate Closure was reduced from 3.5 hours to 1 hour following the implementation of Approved Modification P12[4] on 2 July 2002. The reduction in Gate Closure was accompanied by the creation of an additional contractual arrangement called a "Pre-Gate Closure Balancing Mechanism Unit Transaction" ("PGB Transaction"). This balancing service enables the SO to synchronise or desynchronise Balancing Mechanism Units with dynamics that extend outside the Balancing Mechanism with Gate Closure set at 1 hour.

Imbalance cashout ensures that any electricity not covered by contracts is paid for at or charged at a price that relates to the costs that the SO has incurred in undertaking Electricity Balancing actions. Imbalance cashout prices are designed to target the costs of Electricity Balancing onto Parties on whose behalf the SO has taken Electricity Balancing actions. Currently, a dual cashout system exists under which there are two Energy Imbalance Prices: the System Buy Price ("SBP") and the System Sell Price ("SSP"). Parties who are 'short' (generators whose output is less than their contract volume or suppliers whose demand exceeds their contract volume) are charged the SBP for their imbalance volumes. SBP is intended to represent the average price at

[2] As prescribed by The Electricity Supply Regulations, 1988 (amended 1998) and consistent with its statutory duties and licence conditions.

[3] Gate Closure is the last point at which Parties can notify their contract position to NETA Central Systems and at which Parties can resubmit their Physical Notifications to NGC.

[4] Modification P12: 'Reduction of Gate Closure From 3.5 Hours To 1 Hour' was approved by the Authority on 2 May 2002.

which electricity is bought for the System. It is calculated as the volume-weighted average of the Offers accepted in the Balancing Mechanism for Electricity Balancing purposes (plus the costs of electricity bought by the SO outside the Balancing Mechanism for Electricity Balancing purposes). Parties who are 'long' (generators whose output exceeds their contract volume or suppliers whose demand is less than their contract volume) receive the SSP for their imbalance volumes. SSP is intended to reflect the average price at which electricity is bought from the System. It is calculated as the volume-weighted average of the Bids accepted in the Balancing Mechanism for Electricity Balancing purposes (plus the costs of electricity sold by the SO outside the Balancing Mechanism for Electricity Balancing purposes).

Some market participants have expressed concerns in relation to the methodology by which Energy Imbalance Prices are calculated. They argue that the Energy Imbalance Prices do not only reflect Electricity Balancing costs but can also include costs associated with System Balancing. Moreover, they suggest that SBP tends to be distorted by System Balancing costs more frequently than SSP and hence that the spread between SBP and SSP is larger than would be the case if System Balancing costs were correctly excluded. This, in turn, creates asymmetric risks for Parties in response to which they have tended to go long to avoid exposure to high SBP, with the result that the market itself is being driven long. Therefore, some participants consider that the current dual price cashout regime is leading to economic inefficiency.

In response to its concerns about imbalance prices, on 4 April 2002, Electricity Direct submitted Modification Proposal P74: "Single Cost-Reflective Cash-out Price".

**The Modification Proposal**

Modification Proposal P74 seeks to further the achievement of the applicable BSC Objectives[5] by modifying the BSC to amend the application of Energy Imbalance Prices such that a single price cashout mechanism is in operation. Under Modification Proposal P74, when the Total System Energy Imbalance Volume ("TQEI"[6]) for a Settlement Period is:

- Negative, then the Imbalance volumes on all Energy Accounts are to be cashed out at SBP;
- Positive, then the Imbalance volumes on all Energy Accounts are to be cashed out at SSP;

[5] The applicable BSC Objectives are contained in Condition C3.3 of NGC's Transmission Licence and are:
(a) the efficient discharge by the licensee of the obligations imposed upon it by this licence;
(b) the efficient, economic and co-ordinated operation by the licensee of the licensee's transmission system;
(c) promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity;
(d) promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

[6] TQEI is the sum of all imbalance volumes over all energy accounts other than the energy accounts held by the Transmission Company.

- Zero, then the Imbalance volumes on all Energy Accounts are to be cashed out at a default Energy Imbalance Price, which will be the arithmetic mean of SBP and SSP.

TQEI is calculated from notified contract positions and metered volumes. Neither contract positions nor metered volumes are reported until some time after real time, although contract positions have to be notified by Gate Closure. Consequently, the TQEI variable is not available in real time and it is not calculated and reported until the Settlement Administration Agent undertakes a Settlement Run.

**Alternative Modification Proposal**

During its assessment of Modification Proposal P74, the Pricing Issues Modification Group (the "Group") considered that prompt price reporting is a key requirement of any modification to the Energy Imbalance Price calculation. The Group considered that Modification Proposal P74 did not meet this requirement and so the Group developed alternative options.

Following consideration of other options, the Group developed Alternative Modification Proposal P74. Alternative Modification Proposal P74 uses a method for determining the overall energy imbalance of the System that does not rely on TQEI. Under Alternative Modification Proposal P74, the direction of the energy imbalance of the System would be based on the volume of balancing actions taken by the SO to alleviate the energy imbalance on the System. This would be determined by creating separate purchase and sale stacks and then subtracting the sale stack volume from the purchase stack volume to produce a Net Imbalance Volume ("NIV"). The purchase stack would include all Offers accepted by NGC and NGC's forward purchases for that Settlement Period while the sale stack would include accepted Bid volumes and NGC's forward sales. The NIV would be deemed to represent the overall energy imbalance of the System and the Energy Imbalance Price is derived from the balancing actions associated with NIV. The netted off balancing actions are deemed to have been taken for System Balancing purposes.

When the sale stack is larger than the purchase stack, the NIV would be negative. Conversely, when the purchase stack is larger than the sale stack, the NIV would be positive. This is the opposite sign convention for that in place for TQEI. Consequently, under Alternative Modification Proposal P74, when the NIV for a Settlement Period is:

- Negative, then the Imbalance volumes on all Energy Accounts are to be cashed out at SSP;
- Positive, then the Imbalance volumes on all Energy Accounts are to be cashed out at SBP;
- Zero, then the Imbalance volumes on all Energy Accounts are to be cashed out at the maximum of the cheapest non-arbitrage Offer price and the most expensive non-arbitrage Bid price. Where there is no such Offer and no such Bid the cashout price is zero.

The Bids (Offers) and forward trades left in the NIV stack would be used in the calculation of SBP or SSP, as appropriate.

**Related decisions**

*Modification Proposal P78*

In addition to the Group's consideration of Modification Proposal P74, the Panel deemed that the Group should consider in parallel Modification Proposal P78: "Revised Definition of System Buy Price and System Sell Price", as they both addressed similar perceived defects in the BSC.

Modification Proposal P78 was submitted by NGC on 5 April 2002. It proposes the revision of the definition of Energy Imbalance Prices such that there is a main and a reverse price. The main price is to be calculated from those balancing actions taken to alleviate NIV. Under Modification Proposal P78, NIV is calculated in the same manner as under Alternative Modification Proposal P74. Modification Proposal P78 suggests that the reverse price is derived from a market price, based on trading on the forwards and spot markets. Alternative Modification Proposal P78 sets the reverse price as being the price attached to the first non-arbitraged Bid-Offer Acceptance in the main stack.

The Authority's decision in relation to Modification Proposal P78 has been issued concurrently with this letter.

*Balancing Services Adjustment Data ("BSAD") Methodology Statement consultation*

Alternative Modification Proposal P74, should it be approved, requires complementary revisions to be made to the Balancing Services Adjustment Data ("BSAD") Methodology Statement[7]. In particular, Alternative Modification Proposal P74 requires an amendment to the formulation and utilisation of the BSAD variables submitted by NGC. The BSAD variables are currently formulated and reported on a gross basis and only Electricity Balancing actions are included. However, the volumes of both Electricity and System Balancing actions are required in order to calculate NIV and there is a requirement for net BSAD to be reported. With this in mind, on 23 July 2002 NGC initiated a 14-day consultation process in relation to proposed amendments to the BSAD Methodology Statement. The Authority's decision in relation to the BSAD Methodology Statement consultation has been issued concurrently with this letter.

The Panel considered the P74 Assessment Report on 18 July 2002. The Panel recommended that Modification Proposal P74 should be submitted to the Report Phase, with a recommendation that the Proposed Modification should not be made and that the Alternative

[7] NGC has produced and maintains the BSAD Methodology Statement In accordance with special condition AA4 of the Transmission Licence. The purpose of the BSAD Methodology Statement is to set out the information on relevant balancing services that will be taken into account under the BSC for the purpose of determining Energy Imbalance Prices.

Modification Proposal should be made. ELEXON published a Draft Modification Report on 1 August 2002, which invited respondents' views by 7 August 2002.

**Respondents' views**

In total, ELEXON received 15 responses to the consultation on the Draft Modification Report for Modification Proposal P74. Of the responses, five expressed support for the provisional recommendations in the Draft Modification Report, eight were opposed to the provisional recommendations and the remaining two respondents made no comments in respect of the Draft Modification Report.

The five respondents in favour of the provisional recommendations considered that the introduction of a single price would enhance the cost reflectivity of Energy Imbalance Prices and enhance price transparency. These respondents favoured Alternative Modification Proposal P74 because they considered that it ensured that Energy Imbalance Prices can be reported promptly. Whilst agreeing that Alternative Modification P74 better facilitated the relevant BSC Objectives, two of these respondents stated that they preferred Alternative Modification Proposal P78 to either Modification Proposal P74 or Alternative Modification P74. Several respondents commented that the use of the NIV in Alternative Modification Proposal P74 would go someway to improve the current methodology for distinguishing between System and Electricity Balancing actions.

The eight respondents who did not support the provisional recommendations considered that both Proposed Modification P74 and Alternative Modification Proposal P74 should be rejected. Several of these respondents were opposed to the application of a single cashout price because this would not correctly reflect the value of actions on one side of the market. The respondents believed that this would reduce the cost reflectivity of imbalance prices.

Several of these respondents also considered that the incentives for Parties to balance would be weakened by the introduction of a single cashout price. Respondents considered that a single cashout price would encourage Parties to speculate on market direction, potentially creating uncertainty for the SO when making decisions relating to balancing the System. These respondents considered that weaker incentives for Parties to balance would also increase the balancing costs incurred by the SO.

Those opposed to the provisional recommendations also highlighted the potential for increased volatility in Energy Imbalance Prices that moving to a single price, which could switch between SSP and SBP from one Settlement Period to another, might bring. These respondents considered that this could increase risk and uncertainty for market participants.

**Panel's recommendation**

The Panel met on 15 August 2002 and considered Draft Modification Report for Modification Proposal P74, the views of the Group and the consultation responses received.

The Panel recommended that the Authority should accept Alternative Modification Proposal P74. The Panel recommended that Alternative Modification Proposal P74 should be implemented on 25 February 2003 if an Authority decision is received by 6 September 2002. Where an Authority decision is made after 6 September 2002 but before 19 February 2003 the Panel recommended that the Implementation Date should be 24 June 2003.

The Panel recommended that the Authority should reject Proposed Modification P74. However, if the Authority determines that the Proposed Modification should be made, the Panel recommended that the Implementation Date should be 25 February 2003 if an Authority decision is received by 6 September 2002. Where an Authority decision is made after 6 September 2002 but before 12 March 2003 the Panel recommended that the Implementation Date should be 24 June 2003.

Both original and Alternative Modification Proposal P74 required a decision to be issued by 6 September 2002 in order for implementation to take place in February 2003, should either be approved. On 6 September 2002, Ofgem contacted ELEXON and requested an extension to this deadline. ELEXON agreed to an extension and the deadline was revised to 9 September 2002.

**Ofgem's view**

Ofgem[8] considers, having had regard to its statutory duties, that neither Modification Proposal P74 nor Alternative Modification Proposal P74 better facilitate the applicable BSC Objectives.

Ofgem considers that the principle behind the current dual cashout mechanism continues to be appropriate. A Party whose metered position differs from their contracted position imposes additional costs on the System Operator who is seeking to balance the System in real time. Ofgem continues to consider that it is important for these costs to be targeted onto the Party concerned to act as an incentive to balance their position. While it is difficult to value the actual cost imposed by the Party being out of balance, to assume that the cost is zero by adopting a single cashout price would be even more arbitrary. Consequently, it is appropriate that participants who are spilling electricity should receive a lower price for their electricity than if they had been fully contracted since they may be imposing costs on the system. Conversely, participants on whose behalf the SO has to procure the flexible delivery of electricity at short notice should pay the full cost of power delivered over short timescales. The use of a dual cashout price regime incentivises participants to balance their own positions by Gate Closure and hence the actions that the SO has to take are minimised. Ofgem considers, as outlined below, that the single cashout price methodology proposed under original and Alternative Modification Proposal P74 might weaken the incentives for Parties to balance. Ofgem recognises that there are concerns relating to the calculation of Energy Imbalance Prices which apply within the dual cashout mechanism, but Ofgem continues to consider that a dual cashout mechanism is appropriate and that the calculation of Energy Imbalance Prices can be improved.

[8] Ofgem is the office of the Authority. The terms "Ofgem" and "the Authority" are used interchangeably in this letter.

Ofgem agrees with the concern raised by some market participants that the introduction of the single price cashout mechanism (as proposed in Modification Proposal P74 and Alternative Modification Proposal P74) could increase volatility in cashout prices. From half-hour to half-hour, it would possible for the price to switch between SSP and SBP. In light of this potential volatility, Parties may continue to opt to be contractually long to avoid exposure to SBP. Consequently, Ofgem considers that there may be no improvement in the incentives for Parties to balance their individual positions and no improvement in the balance of the System overall.

Ofgem also agrees with the concern raised by some market participants, including NGC, that the application of a single price cashout mechanism of the type proposed in Modification Proposal P74 and Alternative Modification Proposal P74 might actually weaken the incentives on Parties to balance. Applying the same cashout price to all individual imbalances regardless of whether or not they are out of balance in the same direction as the overall System could encourage Parties to speculate on the position of the System. Parties could be incentivised to take a contrary position to the overall System balance. For example, if it is anticipated that the System will be short, so that all imbalances will be cashed out at SBP, a Party could opt to go long and receive SBP for its spill. This might be more favourable than selling power in advance of Gate Closure in which case the incentives for individuals to balance their positions would be diminished. Whilst such actions might improve the overall System imbalance, this would only be the case if Parties were able to forecast accurately the likely overall position of the System. NGC considers that this will reinforce the tendency for a single cashout price to make the market length and Energy Imbalance Prices less stable as participants individually forecast market imbalance and then act to reduce it. Ofgem notes that NGC has expressed concerns relating to any incentive for Parties to speculate on market direction.

Additionally, Ofgem notes that NGC considers that such unilateral actions may make it more difficult to balance the System, particularly if they are not notified. Any Party choosing to speculate on market direction is taking a risk, based on their assessment of the ultimate market direction. Such Parties will aim to make their assessment as close to Gate Closure as possible. Consequently, they may seek to revise their Physical Notifications ("PNs") frequently, and significantly, in the run up to Gate Closure. NGC has argued that this would be undesirable. In particular, NGC suggested that with 1 hour Gate Closure it could be entering into PGB Transactions at the same time as PNs are being changed with the risk that it commits to unnecessary balancing actions.

Ofgem considers that any weakening of the incentives for Parties to balance, such as might occur under both Modification Proposal P74 and Alternative Modification Proposal P74, could potentially move the System further out of balance leading to the SO having to take additional balancing actions and so incur higher costs on behalf of customers. Ofgem does not believe that this would facilitate the achievement of the applicable BSC Objectives of ensuring "the efficient, economic and co-ordinated operation by the licensee of the licensee's transmission system" and "promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity".

Ofgem notes that the method for determining the overall position of the System under Proposed Modification P74 relies upon a variable that is not calculated until some time after real time. Ofgem agrees with the concerns presented by the Group that this would compromise prompt price reporting. Ofgem considers that increasing the length of time after each Settlement Period that prices are available would be a retrograde step, reducing transparency and increasing uncertainty for market participants. Therefore, Ofgem does not consider that Proposed Modification P74 should be approved.

Alternative Modification Proposal P74 introduces the concept of the NIV, which both allows prompt price reporting and seeks to improve the differentiation between System and Electricity Balancing actions for the purposes of calculating Energy Imbalance Prices. Ofgem accepts NGC's advice that the costs of System Balancing actions can affect Energy Imbalance Prices and that basing cashout prices on the actions taken to alleviate NIV should reduce the extent to which the costs of System Balancing actions are included in Energy Imbalance Prices. However, given the arguments outlined above with respect to incentives for Parties to balance, Ofgem considers that Alternative Modification Proposal P74 does not further the achievement of the applicable BSC Objectives and as such should not be approved.

**The Authority's decision**

The Authority has therefore decided not to direct that Modification Proposal P74 or Alternative Modification Proposal P74 should be made and implemented.

Please do not hesitate to contact me on the above number if you have any queries in relation to the issues raised in this letter or alternatively contact Anthony Doherty on 020 7901 7159.

Yours sincerely

**Sonia Brown**
**Head of Electricity Trading Arrangements**
Signed on behalf of the Authority and authorised for that purpose by the Authority