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05 October 2004

Our Ref: MP No P162

The National Grid Company, BSC Signatories and
Other Interested Parties

Dear Colleague,

**Modification to the Balancing and Settlement Code - Decision and notice in relation to
Modification Proposal P162: "Changes to the definition of Imports and Exports"**

The Gas and Electricity Markets Authority (the "Authority")¹ has carefully considered the issues raised in the Modification Report² in respect of Modification Proposal P162 concerning the Balancing and Settlement Code (the BSC).

The BSC Panel (the Panel) recommended to the Authority that:

- the proposed Modification P162 should be made
- the P162 Implementation Date should be 10 Working Days after an Authority decision, and
- the proposed text for modifying the BSC should be as set out in the Modification Report.

Having carefully considered the Modification Report and the Panel's recommendation and having regard to the Applicable BSC Objectives³ and the Authority's wider statutory duties,⁴ the

¹ Ofgem is the office of the Authority. The terms "Ofgem" and "the Authority" are used interchangeably in this letter.

² ELEXON document reference P162RR, Version No. Final/1.0, dated 16 June 2004.

³ The Applicable BSC Objectives, as contained in Standard Condition C3(3) of NGC's Transmission Licence, 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;
- e) the undertaking of work by BSCCo (as defined in the BSC) which is:
 - (i) necessary for the timely and effective implementation of the proposed British Electricity Trading and Transmission Arrangements (BETTA); and
 - (ii) relevant to the proposed GB wide balancing and settlement BSC;and does not prevent BSCCo performing its other functions under the BSC in accordance with its objectives.



Authority has decided to direct a Modification to the BSC in line with the Modification Proposal P162.

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

In addition, this letter constitutes notice by the Authority under section 49A of the Electricity Act 1989 in relation to the direction.

Background

Section K of the BSC prescribes which Parties should be responsible for Imports and Exports to and from the Total System and how such Imports and Exports should be metered or measured. It describes what Imports and Exports are: that they exist at a Boundary Point; are per Party concepts; and are direction specific. It further qualifies what Imports and Exports may be by relating such flows to particular items of Plant and Apparatus. In particular, references to Plant and Apparatus (from which flows arise) are taken to include Customer's premises, Third Party Generation, generating plant or an Interconnector. Furthermore, Section K also indicates that the net flow from a Generating Unit and its associated unit transformer load should be regarded as a single flow. There are obligations on the responsible Parties to install metering equipment to measure each of these flows. Subsequent obligations enable Balancing Mechanism (BM) Units to be constructed, applying aggregations where necessary, of the resulting Metered Volumes.

Modification Proposal P162 seeks to address a possible ambiguity in Section K which could give rise to differing interpretations of how these rules apply to a number of specific situations and the argument that many existing Metering Systems may not be compliant with one possible interpretation of the BSC, despite following the rules defined in the Codes of Practice.

Modification Proposal P162 contends that if the perceived ambiguities were to remain, a number of participants may be faced with obligations to install significantly more Metering Systems than customarily required to enable BM Units to be adequately defined and quantified in Settlement. In addition, if the current BSC drafting were to remain, any resultant additional Metering Systems and increases in the number of BM Units associated with certain sites would result in registration and Settlement processes becoming more complex without commensurate benefit.

In order to attempt to rectify this situation, SSE Energy Supply Ltd submitted Modification Proposal P162, on 30 January 2004.

The Modification Proposal

Modification Proposal P162 seeks to modify the BSC so as to clarify the definition of Imports and Exports contained within Section K of the BSC. P162 also seeks to ensure that Section K is consistent with current operational practice and the Codes of Practice.

⁴ Ofgem's statutory duties are wider than the matters that the Panel must take into consideration and include amongst other things a duty to have regard to social and environmental guidance provided to Ofgem by the government.

P162 was justified by the Proposer on the grounds that if it were approved, the BSC would better reflect the custom and practice for the identification of Imports and Exports and the consequential Metering System requirements. It was suggested that this would enable all Parties to be treated on an equitable basis and the potential need for changes to existing Metering System arrangements would be avoided.

The proposer contended that if the identified defect were to remain, some participants would be faced with obligations to install meters to a greater extent than would customarily be required to enable BM Units to be adequately defined and quantified in Settlement. The proposer further asserted that one possible interpretation of the current BSC provisions would require a number of existing participant sites to install additional meters, and that these potentially onerous consequences would be visited on certain participants, dependent upon technical differences in connection configuration, rather than any material difference in the impact of the relevant sites on Settlement, or System operation. It was also suggested that the development of micro generation could be negatively impacted.

In terms of the Applicable Objectives, the Proposer stated that, were the modification made, any possible discrimination between Parties would be removed and potential barriers to entry would be reduced, thereby facilitating the better achievement of Applicable Objective (c). It was also asserted that Applicable Objective (d) would be better facilitated as the modification would ensure that Parties would not be required to install additional metering, and guard against the introduction of complexities in the registration and Settlement processes that the installation of such metering would entail.

The Group agreed that the current definition of Imports and Exports is unclear and that this may result in different interpretations of the Code arising. The Group considered that the potential for different Parties to incur varying costs resulting from different perceptions of Code obligations could not be considered to be in the interests of promoting effective competition in the market. It was also agreed that where definitions within the Code may be subject to multiple interpretations this increases risks to market participants, and that increased market certainty in the definition of Imports and Exports would be appropriate.

It was the view of the Group that no benefits to Settlement integrity arising from the additional Metering Systems which would be required under the more onerous interpretation of the Code could be identified, and that the potential accrual of costs without benefits was inconsistent with promoting an efficient market. It was also agreed during the Group's discussions that small scale generation would be particularly badly affected by such costs as the requirement for separate metering would be applied to all Generating Units below the Boundary Point, regardless of scale. It was suggested that this could undermine the ability of renewable energy sources to participate in the market.

The Group therefore considered that a clear legal baseline that obviated the risk of unnecessary costs being incurred by subsets of the market would result in the better facilitation of Applicable Objective (c).

The Group noted that the additional Metering System requirements required by the more onerous interpretation of the Code would result in additional Metering System registrations, BM Unit registrations and more complex Aggregation Rules. It was agreed this would impact upon BSC systems, processes and performance. The Group also noted that lack of clarity in Code

obligations may result in BSCCo inefficiencies resulting from a greater provision of support to Parties seeking advice on their obligations.

The Group therefore considered that the implementation of P162 would result in the better facilitation of Applicable Objective (d).

The Panel considered an Initial Written Assessment at its meeting of 12 February 2004 and agreed that an Assessment Report should be prepared for their meeting on 8 April 2004. It further directed that an interim report should be prepared for its consideration at the intermediate Panel meeting, in order that further visibility should be afforded with regard to the intent and scope of this Modification Proposal.

The SSMG met three times to discuss P162, on 16 February, 25 February and 12 March 2004, and issued a consultation document for industry feedback on 2 March 2004. The Group prepared an Assessment Report for the Panel's consideration at its meeting on 8 April 2004. The Panel directed that the Assessment Procedure should be extended by an additional month to further consider transmission company concerns regarding the clarity of the draft legal text and to provide assurance that the Group had adequately sense-checked legal text against a variety of example site set-ups.

A revised Assessment Report reflecting the Group's determinations on the P162 Modification Proposal, and additional information prepared in response to the Panel request for further analysis was prepared for the May 2004 Panel meeting. It also contained revised legal text prepared by the Group to address the concerns raised by the transmission company. The Panel considered the P162 draft Modification Report and the responses to the P162 Report Consultation at its meeting of 10 June 2004, and confirmed that the final Modification Report should contain the recommendation that the Proposed Modification should be made.

Responses to ELEXON Consultation

Following concerns raised by the Transmission Company on the clarity of the draft legal text, ELEXON published a draft Modification Report for the Panel Meeting on 14 May 2004 together with a revised legal text.

Respondents were asked to submit their views by 25 May 2004. Seven responses (representing 37 Parties and one non-party) expressed support for the Proposed Modification. One response (representing three Parties) opposed the Proposed Modification and the remaining response (representing one Party) provided a "no comment" response.

Those approving the modification generally agreed that the present wording, without the modification, was ambiguous and that the revised legal text would give effect to the existing intent of the code in its definition of imports and exports and that it would not result in any change to operational practice.

The respondent objecting to P162 believed that the modification, in removing BSC K1.1.4(c), goes far beyond any immediate desire to make relatively trivial cost reductions for licence exempt wind farms or other small scale generation schemes. This respondent believed that minimal changes are required to clarify the current intent of the BSC that:

- licensed generating units should be separately metered (optionally with their associated unit transformer, if any); and

- generation and demand sharing a Boundary Point should be separately metered even when belonging to the same Party except where the generation is licence exempt and does not give rise to an export from the site.

The Respondent further contended that the Proposed Modification may save small amounts of money now but could create barriers to entry or increase costs in the future, particularly should the level of distributed and licence exempt generation increase significantly. The respondent considered that certain issues require wider discussion, beyond the scope of the BSC, including:

- Loss of transparency of national generation capability and underlying demand. This includes potential loss of transparency of the fuels providing the energy.
- Entrenchment of the 'embedded benefits' to a subset of generation and demand. These 'embedded benefits' represent a subsidy from users paying transmission, balancing and other costs to the embedded parties. In the long term, and as distributed generation grows, it should be more efficient economically to provide the subsidy directly rather than through blanket 'benefits' regardless of true system service usage, as at present.
- 'Vertical integration' at a site level presents a barrier to future competition. Sites constructed with single net metering at the boundary point would require considerably more expenditure to install component metering at a future date. The main cost for non-domestic voltages is the Current and Voltage Transformers and associated circuitry and protection, which are relatively cheaper to install as part of the design or construction. Division of large sites or separation of generation and demand at a future date to facilitate competition becomes more difficult.
- Operationally, as the volume of embedded and exempt generation increases, and the number of sites exporting to the total system increases, the balancing and stability of the Total System is likely to become more complicated. NGT currently require more technical information about current generation than is required for idealised electricity trading, in order to maintain the stability and facilitate balancing of the transmission system. With increased distributed generation, both the transmission company and the distribution companies are likely to require more information about the underlying physical assets and their current state in order to maintain electrical stability and balance. Discrete metering below the Boundary Point can facilitate this.
- While physical metering solutions are avoided for 'distributed' generation, potential technical developments in metering will be stifled. Electronic and communication technology has moved a long way since the electricity industry was privatised.
- True demand side participation in balancing will not occur until the demand of individual customers is measured half-hourly (or at finer resolution, as had been anticipated in 1990 when the Pool was created).
- Parties with generation and demand metered net at a boundary point will have flexibility to vary opaquely the sources of energy and potential balancing services provided to network operators, by 'self-despatch within balancing timescales', in a manner not available to larger power stations or demand sites and licensed generators. The latter are required to provide energy and balancing on an individual Generating Unit/BM Unit

basis and are effectively exposed to imbalance for failure to provide energy or service from a particular BM Unit, even though the connection to the Total System is effectively at one location. The modification as drafted would thus further increase the 'privileges' given to small generators.

In summary, this respondent believes that many benefits are provided to small scale generation to meet wider objectives, but this modification goes a step too far by providing obstacles to potential future developments for more efficient operation of the market, by removing the capability to distinguish supply and demand for electricity.

The Settlement Standing Modification Group (the Group) considered these comments but did not perceive any benefits to Settlement integrity from the additional Metering Systems required under the more onerous interpretation of the BSC. In addition, the potential accrual of costs without benefits was also inconsistent with promoting an efficient market. The Group believed that small scale generation would be particularly badly hit with such costs were the BSC to be interpreted as requiring separate metering for all generating units below the Boundary Point regardless of scale. This could undermine the ability of renewable energy sources to participate in the market.

The respondents' views are summarised in the Modification Report for Modification Proposal P162, which also includes the complete text of all respondents' replies. The only costs identified during the Assessment Procedure as resulting from the implementation of this modification are those associated with modifying the legal text in Section K of the BSC.

Panel's recommendation

The Panel met on 10 June 2004 and considered P162 draft Modification Report, and the responses to the P162 report Consultation and confirmed that the Modification Report should contain the recommendation that the Proposed Modification should be made.

The Panel recommended that the Authority should approve the Proposed Modification and that, if approved, the Proposed Modification should be implemented 10 days after the Authority's decision.

Responses to Ofgem GB Consultation

On 8 June 2004 Ofgem issued a GB Consultation seeking comments in relation to Modification Proposal P162 "Changes to the definition of Imports and Exports".

National Grid Transco has responded and believes that it would be appropriate to apply the legal text, associated with Modification Proposal P162, to the GB BSC and that the modification serves to clarify the current legal text and has no impact upon their existing operational practice. As such, National Grid Transco does not believe that there are any specific issues associated with the modification that make the proposed changes inappropriate for implementation within the GB BSC.

However the respondent also stated that whilst there are currently no transmission directly-connected licence exempt generators within England and Wales, following the implementation of the proposed BETTA arrangements, (where 132kv lines in Scotland will be included as part of the transmission system), these connections will become far more likely. In these circumstances

it may be that, in order to allow for the efficient, economic and co-ordinated operation of the transmission system, extra import or export metering systems may be required from such parties at some point in the future. Should this transpire, National Grid Transco will look to bring forward modifications to the BSC.

Another respondent has replied to reiterate the comments which they had previously made to the Elexon Consultation and which are detailed above.

Ofgem's view

Ofgem considers that it is in the interests of all BSC Parties for the provisions of the BSC to be as clear as possible. Ofgem considers that Applicable Objective (c), will be served best by the removal of requirements which may be seen by some entrants as necessitating that additional metering be installed and maintained. The more onerous interpretation that is possible from the current drafting of the existing obligations in Section K of the BSC would appear to require that all generating units should be individually metered and, in addition, that the metering installed should distinguish between supply and demand flows at the boundary point. Those participants interpreting the BSC in this way would clearly be at a commercial disadvantage.

There is also a requirement under Applicable Objective (d) to promote efficiency in the implementation and administration of the balancing and settlement arrangements. If metering is to be carried out in an efficient and economic manner, it is desirable that any perceived ambiguities are removed from the existing requirements and that any costs associated with unnecessary metering should be minimised. Indeed, adoption of a more onerous interpretation of the requirements is likely to lead to the recovery of data which is not required for settlement purposes and which will lead to inevitable unnecessary processing of data with the associated additional costs. If implemented, Modification Proposal P162 will remove this anomaly.

One suggestion made during industry consultation was that, whilst removal of the requirement to meter individual generating units could be supported, it was possible that long term difficulties might occur if the requirement to distinguish between supply and demand at the boundary point was removed, particularly as the level of distributed generation increased. In addition, the installation of such metering at a later date would be considerably more expensive to carry out than if it were carried out at the time of the construction of the installation.

Whilst these concerns are recognised Ofgem does not support a requirement for additional metering now, which is not currently supported by settlement requirements. Indeed the mandatory installation of separate metering for generation and demand is not in accordance with current practices or the Codes of Practice and would have serious commercial consequences for Parties because of the need for additional metering. It should be emphasised that nothing in these requirements prohibits the installation of additional metering, should further data be required for operational purposes.

Ofgem recognises that a proliferation of small generator connections may, in time and in some locations, make it desirable to collect an increased quantity and granularity of metered data. Many such connections will be on sites that import and export varying quantities of electricity. Imposing more stringent metering requirements now, in isolation from other considerations that may yet not be fully understood, does not appear to be an appropriate way in which to address this potential challenge. It is Ofgem's view that the question of the requirement for metered data should be considered as an integral part of work that is already in progress on the options for moving to more actively managed electricity networks. Active network management is an

important theme in the work of the Technical Steering Group set up by the Distributed Generation Co-ordinating Group.

The point has also been made that the proposed modification will also lead to loss of transparency of national generation capability and of fuels providing energy. Whilst this may be a possible outcome as a result of implementing the Proposed Modification, Ofgem does not believe that the impact of not measuring the extent of electricity from different fuels in respect of unlicensed generation will be significant.

One respondent to the consultation has contended that this modification will lead to further entrenchment of embedded benefits and that further vertical integration will prevent future competition. Ofgem considers that it is not a useful exercise to speculate on how distributed generation might be rewarded in the future. It must be emphasised that the metering now proposed at the boundary point is not 'net metering' in the normal sense, (- i.e. where export is rewarded at the same rate as for import), but import/export metering. Nothing in this proposal inhibits a customer/exporter from contracting with different suppliers for both energy purchase and sales.

Another objection raised is that more information is required about physical assets, particularly as the volume of embedded and exempt generation increases for balancing and system stability. Ofgem notes that there is a continuing obligation on customers to notify transmission and distribution businesses of the extent of their generation equipment connected to the system. The effect of temporary withdrawal after this notification would normally be comparable to any other load fluctuation. Whilst it is accepted that fault levels on the system would also fluctuate as a result of these changes, separate metering for supply and demand is unlikely to deliver the additional information to address this issue in any case.

Furthermore, Ofgem does not accept that technical developments in metering will be stifled by this proposal and that whilst the benefits of half hourly metering in facilitating demand side management are well known, these are not presently considered to be commercially viable for loads with maximum demands below 100kW.

Ofgem also considers that some differences in operational flexibility between the larger and smaller generators is inevitable and that the opportunity to vary their sources of energy in a way not available to larger generators is at present not material.

In their response to the Ofgem GB Consultation, National Grid Transco pointed out that whilst there are currently no transmission licensed exempt generators within England and Wales, connections of this kind will become more likely when 132kV lines in Scotland are included in the transmission system under the BETTA arrangements. They suggested that extra import or export metering systems might be required in the future in order to operate the transmission system more efficiently and economically. Ofgem's view is that the inclusion of these supplies is unlikely to have a significant effect on the need for the additional metering as previously specified, and that in any case it would be wrong to impose additional costs on the market for metering now which may or may not be required in the future.

Therefore, following careful consideration of the views of the Panel, the responses to the various consultations, and having regard to the views above, Ofgem considers that Proposed Modification P162 would, overall, better facilitate achievement of the Applicable BSC

Objectives, in particular Applicable BSC Objectives (c) and (d), and should therefore be made. In addition, Ofgem considers that this decision is consistent with its wider statutory duties.

The Authority has therefore decided to direct that the Proposed Modification P162, as set out in the Modification Report, should be made and implemented.

The implementation date for this proposal will therefore be 10 working days from the date of this letter.

If you have any questions, please contact me on the above number.

Yours sincerely,

A handwritten signature in black ink, consisting of a stylized 'i' followed by a '4' and a 'u'.

Iain Osborne
Director of Consumer Markets

Signed on behalf of the Authority and authorised for that purpose by the Authority