

Final Modification Report
Modification Reference Number 217

This draft Modification Report is made pursuant to Rule 7.4 (a) of the Modification Rules and follows the format required under Rule 8.12.4.

1. The Modification Proposal:

To have generic Network Code rules as far as possible which govern provision of a Frequency Response service rather than individually developed and managed NExAs and Ancillary Agreements.

Provisions for Frequency Response already exist in the Network Code (section J4.10), these provisions currently allow for Registered Users to enter into an Ancillary Agreement for a Frequency Response service.

It is felt since the service would be open to all centrally dispatched generators and the terms of the agreement would be the same for all users, the most appropriate place for the detailed provisions of the service would be the Network Code rather than a NExA. This would reduce the administrative burden associated with Ancillary Agreements.

The proposal is to:-

Offer a service to all centrally dispatched CCGTs connected to either the National Grid Company, Scottish Power or Scottish Hydro-Electric electricity transmission systems, to allow a no notice rate change of 25% of SHQ in order that they can meet their obligations under the applicable Grid Code.

The conditions that would need to be met in order to take this service are as follows:-

- 1) Transco will require a flow test at site to ensure that:
 - a) the Transco offtake equipment and upstream pipework are capable of supplying under the conditions of this service, the APPLICABLE OFFTAKE PRESSURE (as per J4.2.1 (v)).
 - b) that no adverse pressure transients are created in any part of the Transco network by the frequency response service.

If condition 1(a) is not satisfied the APPLICABLE OFFTAKE PRESSURE will not apply for the period that a frequency response service is taken by the effected supply point.

If condition 1(b) is not satisfied Transco may decline to offer a frequency response service at the affected supply point.

- 2) Transco may withdraw the service from individual stations where, operational experience or planning data shows that this is, or may be, prejudicial to safe or efficient operation of the Transco network.
- 3) Transco may temporarily suspend the service to individual power stations where, maintenance on the Transco system may be affected by the service. (Notice of 10 working days would normally be given except in a pipeline emergency. The affected duration shall not normally exceed 5 days over and above the maintenance days notified in L.3.)
- 4) The frequency response service is an increase in offtake rate of 25% of the maximum supply point offtake rate, from an offtake rate below the maximum offtake rate up to, but not exceeding the maximum supply point offtake rate, in a period of 10 seconds with no prior notification to Transco.

(Clarifying Note: The FR service is an increase or decrease of up to 25% in the supply point offtake rate from an offtake rate below the SPOR up to, but not exceeding, the SPOR in a period not less than 10 seconds without prior notice to Transco. The duration of the new offtake rate shall not exceed 30 minutes before returning to the original offtake rate.)

- 5) The Frequency Response service shall be subject to revalidation as set out in 1 above, if the maximum supply point offtake rate is increased, or there is a material change in the surrounding network.
- 6) Shippers are required to notify Transco no later than 30 minutes after the commencement of a frequency response period, and at D+1 with details of the number of occasions, start times and volumes involved in each frequency response action.
- 7) Transco retains the right to charge for this service, where costs can be identified as a result of its provision. Initially the charges will be zero.

2. Transco's opinion:

Transco supports the implementation of this proposal.

3. Extent to which the proposed modification would better facilitate the relevant objectives:

Frequency Response is required to enable current and future Centrally Dispatched Generators to comply with their Grid Code obligations, thereby mitigating the potential risk of removal of generating licences, and impact on condition 7(a).

4. **The implications for Transco of implementing the Modification Proposal, including:**

a) **implications for the operation of the System and any BG Storage Facility:**

The modification ensures that clear criteria for the provision of this service exist, and that the extent of no notice ramp rate excursion are defined and properly catered for in the operation of the system. It is not envisaged, from current network analysis predictions that operational configurations will be impacted.

b) **development and capital cost and operating cost implications:**

There will be no development costs associated with this mod. Transco currently does not envisage any additional operating costs.

c) **extent to which it is appropriate for Transco to recover the costs, and proposal for the most appropriate way for Transco to recover the costs:**

Transco currently does not envisage any additional operating costs, although if in the operation of the service costs are identified, Transco will undertake consultation pursuant with our licence obligation on the scale or method of charging.

d) **analysis of the consequences (if any) this proposal would have on price regulation:**

This proposal will have a neutral impact on formula revenue.

5. **The consequence of implementing the Modification Proposal on the level of contractual risk to Transco under the Network Code as modified by the Modification Proposal:**

Transco's level of contractual risk remains unchanged by this proposal.

6. **The development implications and other implications for computer systems of Transco and related computer systems of Relevant Shippers:**

Transco have not been made aware of any User systems implications.

7. **The implications of implementing the Modification Proposal for Relevant Shippers:**

Supply points who are centrally dispatched generators supplying electricity to the grid systems operated by National Grid Company, Scottish Power, or Scottish Hydro will

be able to comply with their relevant Grid Code obligations. Shippers will need to ensure that notification requirements are adhered to.

8. The implications of implementing the Modification Proposal for terminal operators, suppliers, producers and, any Non-Network Code Party:

With respect to section 7 (above), the implications for end customers will depend upon their individual contractual relationships with their supplier.

9. Consequences on the legislative and regulatory obligations and contractual relationships of Transco and each Relevant Shipper and Non-Network Code Party of implementing the Modification Proposal:

Centrally dispatched generators will be able to comply with their relevant grid code obligations.

10. Analysis of any advantages or disadvantages of implementation of the Modification Proposal:

This modification will enable:-

- Generators to meet their grid code obligations.
- Transco to ensure system security by having clear provisions for testing and the temporary or permanent withdrawal of this service on an individual site basis.

This modification reduces the administrative burden associated with the present Network Code wording.

11. Summary of the Representations (to the extent that the import of those representations are not reflected elsewhere in the Modification Report):

Representations have been received from; BP Gas, Shell Gas Direct Ltd, National Power Plc, The Energy Intensive User Group, Enron Europe Ltd, Mobil Gas Marketing (UK) Ltd, Scottish Hydro-Electric plc, British Gas Trading Ltd, ILEX and ScottishPower.

The proposal was supported by all respondents with the exception of EIUG and BPGas. EIUG raised two concerns about the proposal but did not state whether or not they support the proposal. BP Gas supported the principal of standardising and proceduralising the Frequency Response service but felt that it should be within an ancillary agreement and not the Network Code principal document.

The representations and the changes to the proposals which have been included as a result are summarised below in the context of the original proposal:-

Method of despatch and eligible consumers.

Shell Gas Direct, Scottish Hydro-Electric, ILEX and BGT raised questions about the applicability of this service to generators connected directly to Regional Electricity Company REC systems.

After checking the situation with the National Grid Company (NGC), **the proposal has been amended to include Centrally Despatched Generators on all systems.**

Shell Gas Direct questioned whether merit order despatch should be included in the drafting. NGC have confirmed that merit order despatch is not relevant to Frequency Response, and therefore this has not been included.

The need for a NExA

Transco sought views on whether a NExA was required for Frequency Response to be offered. Response on this aspect of the proposal were received from **ScottishPower, Scottish Hydro-Electric, Enron, BGT and National Power**. Views were mixed.

Transco considers that there are two salient points in relation to NExA's.

Firstly, relating to Legacy contracts. Legacy contracts are not party to the Network Code, and therefore Network Code conditions are not binding. As such, without a NExA in place, each legacy contract would need to be amended to allow the Frequency Response service to apply.

For Network Code parties, ramp rate provisions are only defined in NExA's. Currently, only VLDMCs are required to enter into NExAs, and there are a small number of centrally despatched generators who are not VLDMCs. Given the need to be able to suspend or withdraw this service from centrally despatched generators where there may be an impact on the safe operation of the system, the capacity workstream agreed that there is a need to enter into a NExA which would define normal limits should the service be withdrawn or suspended.

Transco's position, therefore, is to maintain the requirement for a NExA to be in place for Frequency Response.

Notice Periods

Shell Gas Direct, Scottish Hydro-Electric, Mobil Gas Marketing and Enron questioned the notification period, both in terms of Shipper notification when the service is being taken and Transco notification of withdrawal and suspension.

The proposal has been modified to clarify the notification periods Transco will provide in withdrawing or suspending the service.

Mobil Gas Marketing requested the notification period be extended from 30 minutes to 1 hour.

Transco require notification, at the earliest opportunity, but no later than 30 minutes after Frequency Response has started in order to monitor the surrounding networks

and ensure that the service is causing no adverse effects. Early notification also ensures that demand increases caused by this service are correctly identified by Transco forecasting staff as Frequency Response and not a sustained increase in load which would have potential knock on effects to forecast demand levels. Transco therefore propose to maintain the 30 minute notification requirement.

Charging

Enron and Mobil Gas Marketing expressed concern over future charging, and sought clarification over charges for flow tests.

If costs are identified in the provision of this service, which Transco proposed to recover, Transco would undertake a pricing consultation pursuant to condition 4 of Transco's licence. Ofgas retain the right of veto over any charges levied.

Transco do not propose to charge for flow tests, as these are tests for Transco purposes. Future power stations will need to be tested as part of their commissioning, which Transco does not charge for.

Technical matters

A number of Technical matters were raised by **Mobil Gas Marketing, Enron and BGT**, relating to the operation of the service.

In order to answer these technical matters Transco has consulted with NGC who have confirmed the following points:-

All generation has to operate in **limited frequency control** at all times when it is not in **Frequency Response**. In **limited frequency control** a generator may have to **reduce** output as an emergency action if the system frequency was to rise above operational levels. This situation has occurred only once in the last 5 years. **Limited frequency control** is not the Frequency Response service covered by J.4.10.

Primary and Secondary response make up **Frequency Response** (which is covered by J.4.10).

Primary Response is defined as the automatic increase in output that occurs within 10 seconds in response to a fall in frequency of 0.5 Hz, and is sustainable for a further 20 seconds.

Secondary Response is defined as the automatic increase in output that occurs within 30 seconds in response to a fall in frequency of 0.5 Hz and is sustained for a further 30 minutes.

It should be noted that primary and secondary response are complementary. Primary response can be requested **on its own**. Primary response and secondary response can be requested **together**, but secondary response **can not be requested on its own**.

NGC have previously confirmed that where Transco withdraws or suspends the service, the generator will not be called to provide frequency response.

Enron questioned whether 'failed sites' could have Frequency Response to a lower level than a 25% rate change. The generating requirement of Frequency Response is set in the Grid Code, and the legal drafting of J.4.10. reflects this. Transco would be unable to determine whether a lower volume change would enable generators to provide Frequency Response to the Grid Operators. Additionally **Enron** questioned whether 30 minutes is a sufficient period for Frequency Response. Again this period is set in the Grid Code as the requirement for secondary response and J.4.10 reflects this requirement.

Other points raised in representations

Energy Intensive User Group questioned whether Transco was discriminating by allowing Centrally Despatched generators to provide Frequency Response whilst not allowing other consumers who provide Frequency Response to have the same service. NGC have confirmed that only Centrally Despatched generators are able to provide the service.

EIUG and Scottish Hydro-Electric commented that monitoring is necessary with this service. **EIUG** also suggested penalties for excursions from ramp rates.

Transco will monitor this service closely during its operation to ensure that there is no detrimental effect. The proposed revision will provide the ability to withdraw or temporarily suspend the service and thus strengthen the existing provisions.

Transco does not consider that this service substantially alters the current position with regard to ramp rate excursions which Transco is currently monitoring.

Mobil Gas Marketing, British Gas Trading and Enron raised questions about this service causing increase flexibility activity, and the need for reinforcement. Transco does not consider that this is a capacity issue, or will lead to reinforcement, since the maximum offtake rate of sites will not be increased or exceeded. Given that the total maximum requirement for the 30 minute service across all sites is approximately 300,000 m³ which should be reflected in nominations, there will be no effect on balancing actions. Transco do not envisage raising linepack levels in association with this service.

12. **The extent to which the implementation is required to enable Transco to facilitate compliance with safety or other legislation:**

This modification is not required to facilitate Transco compliance with safety, or other legislation.

13. **The extent to which the implementation is required having regard to any proposed change in the methodology established under Standard Condition 3(5) of the statement; furnished by Transco under Standard Condition 3(1) of the Licence:**

This modification is not required to enable compliance under this clause

14. **Programme of works required as a consequence of implementing the Modification Proposal:**

The implementation of this proposal will require a schedule of testing to be agreed between Transco, relevant shippers and the grid operators. Prior to testing Transco will undertake a desktop analysis of each power station's capability.

After a successful test Transco may need to amend NExA's where they currently exclude section J.4.10. This amendment will be in the form of a letter.

15. **Proposed implementation timetable (inc timetable for any necessary information systems changes):**

The proposal can be implemented immediately after Ofgas approval.

16. **Recommendation concerning the implementation of the Modification Proposal:**

Transco recommends that this proposal is implemented.

17. **Restrictive Trade Practices Act:**

If implemented this proposal will constitute an amendment to the Network Code. Accordingly the proposal is subject to the Suspense Clause set out in the attached Annex.

18. **Transco's Proposal:**

This Modification Report contains Transco's proposal to modify the Network Code and Transco now seeks direction from the Director General in accordance with this report.

19. **Text provided pursuant to Rule 7.3:**

Delete J4.10 and replace with:-

4.10 **Frequency Response**

- 4.10.1 Where the Consumer's Plant is gas fired generating plant subject to Central Despatch by the National Grid Company plc, Scottish Hydro-electric plc or Scottish Power plc

acting as operators of the electricity transmission in Great Britain ("**the Grid Operators**"), it may be required, at the request of the Grid Operators , to respond automatically and rapidly to changes in the electrical frequency of such system by rapidly increasing or subsequently decreasing the rate of offtake, by up to 25% of the Supply Point Offtake Rate ("**Frequency Response**"). "**Central Despatch**" is the process of scheduling and issuing direct instructions by the Grid Operators in accordance with their grid codes.

4.10.2 Where this paragraph 4.10 applies:-

- (1) there shall be a Network Exit Agreement in force at the System Exit Point;
- (2) the Registered User of the System Exit Point shall notify Transco by Conventional Notice that it requires the Frequency Response service subject to the conditions set out in paragraphs (3) to (9) below;
- (3) the Registered User shall pay such amount (if any) as is identified in the Transportation Statement for Frequency Response;
- (4) where the Registered User has so elected, the requirements of paragraphs 4.5, 4.7.2 and 4.8 shall be disapplied during any period (not exceeding one hour) when the Consumer's Plant is responding to a specific request by a Grid Operators to provide Frequency Response ("**Frequency Response Period**");
- (5) Except as set out in this paragraph 4.10 the requirements set out in the Network Exit Agreement shall apply;
- (6) During any Frequency Response Period any provision contained in the Network Exit Agreement as to the pressure of gas made available for offtake at the System Exit Point shall be suspended;

- (7) During any Frequency Response Period any provision contained in the Network Exit Agreement as to the ramp rates, in accordance with paragraph 4.8, shall be amended such that the rate of increase or decrease in the rate of offtake shall not exceed 25% of the maximum offtake rate in a period of 10 seconds during any Frequency Response Period;
- (8) In respect of any Frequency Response Period any provision contained in the Network Exit Agreement as to the period of notice to be given to Transco in accordance with paragraph 4.6.3 shall be amended such that:-
- (i) the Registered Users (s) shall notify Transco within 30 minutes of a Frequency Response Period having commenced at the System Exit Point; and
 - (ii) the Offtake Profile Notice submitted on the Day following any Day on which a Frequency Response Period was actually provided shall state the time and duration of any period(s) of Frequency Response;
- (9) During any Frequency Response Period any provision contained in the Network Exit Agreement as to the temperature of gas, where preheating equipment has been installed in accordance with paragraph 4.5, shall be suspended.

4.10.3 Transco may, on written notice, or verbal notice subsequently confirmed in writing, to the Registered User withdraw its right to take Frequency Response at the Consumer's Plant where Transco considers that there has been, or is likely to be, a serious detrimental effect on the safe and effective operation of the System by reason of the provision of Frequency Response at the Consumer's Plant.

4.10.4 Transco may temporarily suspend, by giving 10 Working Days notice in writing (or immediately on verbal notice in the case of an Emergency, subsequently confirmed in writing) to the Registered User(s) provision of Frequency Response where maintenance activities on the System may impact Transco's ability to provide Frequency Response at the Customer's Plant.

4.10.5 In providing Frequency Response, or following any material change in the Supply Point Offtake Rate at the Specified Exit Point, Transco shall require that a flow test be performed at the Specified Exit Point. Following any material change in the operating conditions of the System, Transco may require that a flow test be performed at the Specified Exit Point. Any charges for provision of the flow test (if any) shall be set out in the Transportation Statement. If the results of the flow test are unsatisfactory, Transco may decline to provide or withdraw Frequency Response at the Specified Exit Point with effect from a specified date.

Signed for and on behalf of Transco.
Signature:

John Lockett
Manager, Network Code

Date: 20/3/98

Director General of Gas Supply Response:

In accordance with Condition 7 (10) (b) of the Standard Conditions of Public Gas Transporters' Licences dated 21st February 1996 I hereby direct Transco that the above proposal (as contained in Modification Report Reference **217**, version **1.1** dated **18/3/98** be made as a modification to the Network Code.

Signed for and on behalf of the Director General of Gas Supply.

Signature:

Kyran Hanks
Director of Transportation Regulation

Date:

The Network Code is hereby modified, with effect from _____, in accordance with the proposal as set out in this Modification Report, version **1.1**.

Signature:

Process Manager - Network Code
Transco

Date:

ANNEX

Restrictive Trade Practices Act - Suspense Clause

For the purposes of the Restrictive Trade Practices Act 1976, this document forms part of the Agreement relating to the Network Code which has been exempted from the Act pursuant to the provisions of the Restrictive Trade Practices (Gas Conveyance and Storage) Order 1996. Additional information inserted into the document since the previous version constitutes a variation of the Agreement and as such, this document must contain the following suspense clause.

1. Suspense Clause

1.1 Any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which this Agreement or such arrangement is subject to registration under the Restrictive Trade Practices Act 1976 shall not come into effect:

- (i) if a copy of the Agreement is not provided to the Director General of Gas Supply (the "Director") within 28 days of the date on which the Agreement is made; or
- (ii) if, within 28 days of the provision of the copy, the Director gives notice in writing, to the party providing it, that he does not approve the Agreement because it does not satisfy the criterion specified in paragraph 2(3) of the Schedule to The Restrictive Trade Practices (Gas Conveyance and Storage) Order 1996.

provided that if the Director does not so approve the Agreement then Clause 1.2 shall apply.

1.2 Any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which this Agreement or such arrangement is subject to registration under the Restrictive Trade Practices Act 1976 shall not come into effect until the day following the date on which particulars of this Agreement and of any such arrangement have been furnished to the Office of Fair Trading under Section 24 of the Act (or on such later date as may be provided for in relation to any such provision) and the parties hereto agree to furnish such particulars within three months of the date of this Agreement.