

The Directors  
National Grid Gas plc  
National Grid House  
Warwick Technology Park  
Gallows Hill, Warwick  
CV34 6DA

27<sup>th</sup> June 2008

Dear Sirs

**Report on compliance with the UK Transmission System Management Principles Statement for the year ended 31 March 2008 (“the Audit Year”)**

- 1 We have reviewed the extent to which National Grid Gas plc (“National Grid Gas”), in its procurement and use of system management and balancing services, has complied with the UK Transmission System Management Principles Statement (“Transmission SMPS”) for the Audit Year.
- 2 Unless the context otherwise requires, words and expressions defined in the Transmission SMPS, which is a document prepared by National Grid Gas pursuant to Paragraph 5 of Special Condition C5 of its Public Gas Transporter Licence, have the same meanings in this report as in that statement. All references to the Transmission SMPS refer to version 2.4, effective January 2008.

**Respective responsibilities of National Grid Gas and the UK Transmission System Management Principles Statement Auditor**

- 3 National Grid Gas is responsible for taking all reasonable steps to ensure its compliance with the Transmission SMPS in respect of its use of system management services. It is our responsibility, within our terms of reference, to review on a sample basis, the compliance of National Grid Gas with the Transmission SMPS in respect of the use of system management services. This work is performed with a view to expressing an independent opinion as to whether we believe National Grid Gas has complied in all material respects with the Transmission SMPS in the use of system management services.

**Basis of review and scope of work**

- 4 We have planned and performed our review in accordance with our Review Approach which we have agreed with National Grid Gas and which is set out in our document “System Management Principles Statement Audit – Audit Approach Document for the year ended 31 March 2008” (“Supplement”) which has been sent to both National Grid Gas and the Office of Gas and Electricity Markets (“Ofgem”).

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- 5 The Supplement provides a detailed description of the approach we have adopted to the review. In particular, it describes those aspects of system management services that we have examined during our review and those which are outside the scope of this review. Our review included an examination, on a sample basis, of both the system management services procured and used by National Grid Gas, and of the estimates and judgements made by National Grid Gas in using system management services. This report should be read in conjunction with the Supplement disclosed in Attachment A.
- 6 In reaching our conclusion we assessed the risk of a material breach of the way National Grid Gas has used system management services compared with the requirements of the Transmission SMPS, whether caused by fraud or other irregularity or error, and determined the adequacy of procedures and controls established by National Grid Gas to eliminate or reduce such risks.

**Opinion**

- 7 In our opinion, National Grid Gas has in all material respects procured and used system management services in compliance with the Transmission SMPS for the year ended 31 March 2008.

**Use of this report**

- 8 This report is intended solely for the use of the Directors of National Grid Gas and Ofgem. While we acknowledge that this report will be published on the National Grid Gas website, this is for information purposes only and we do not intend that it should be relied upon by anyone other than the parties mentioned above.
- 9 The maintenance and integrity of the National Grid Gas website is the responsibility of the directors of National Grid Gas. The work that we carried out does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to this report since it was initially presented on the website.
- 10 This report has been prepared in the expectation that National Grid Gas and Ofgem will have sufficient experience of system management services to understand the issues raised without further background explanation and to evaluate the contents of this report in the context of the scope of our work.

Yours faithfully

*PricewaterhouseCoopers LLP*

PricewaterhouseCoopers LLP  
Chartered Accountants

# The UK Transmission System Management Principles Statement Audit

Supplement to the UK Transmission System Management  
Principles Statement report for the year ended 31 March 2008

Prepared by PricewaterhouseCoopers LLP, August 2007

**Supplement to our report on compliance with the UK Transmission System Management Principles Statement for the year ended 31 March 2008 (“the Audit Year”)**

- 1 We have reviewed the extent to which National Grid Gas plc (“National Grid Gas”), in its procurement and use of system management and balancing services, has complied with the UK Transmission System Management Principles Statement (“Transmission SMPS”) for the Audit Year.
- 2 The Transmission SMPS is a document prepared by National Grid Gas pursuant to Paragraph 5 of Special Condition C5.
- 3 The results of our review for the Audit Year have been communicated to both National Grid Gas and to the Office of Gas and Electricity Markets (“Ofgem”) in our main report (“Transmission SMPS Report”) which should be considered in conjunction with this Supplement.

**Purpose of this Supplement**

- 4 This Supplement has been prepared in conjunction with the Transmission SMPS Report to provide additional details relating to the work performed in respect of compliance by National Grid Gas with the Transmission SMPS.
- 5 This Supplement describes the review approach adopted by us in our role as the Transmission System Management Principles Statement Auditor.

**Use of this Supplement**

- 6 This Supplement is intended solely for the use of the Directors of National Grid Gas and Ofgem. While we acknowledge that this Supplement will be published on the National Grid Gas website, this is for information purposes only and we do not intend that it should be relied upon by anyone other than the parties mentioned above.
- 7 The maintenance and integrity of the National Grid Gas website is the responsibility of the Directors of National Grid Gas. The work that we carried out does not involve consideration of the maintenance and integrity of that website and, accordingly, we accept no responsibility for any changes that may have occurred to this report since it was initially presented on the website.
- 8 This Supplement has been prepared in the expectation that National Grid Gas and Ofgem will have sufficient experience of system management services to understand the issues raised without further background explanation and to evaluate the contents of this report in the context of the scope of our work.

**Background**

- 9 The Transmission SMPS describes, at a high level, the basis on which National Grid Gas will employ system management services in the operation of the National Transmission System (“NTS”) with respect to the national distribution of gas. The Transmission SMPS has been written to be consistent with National Grid Gas’s licence obligation to operate the NTS in an efficient, economic and co-ordinated manner.
- 10 Paragraph 15 of Special Condition C5 of National Grid Gas’s Gas Transporter Licence defines system management services as ‘services in relation to the balancing of gas

inputs and gas off takes from the NTS and includes balancing trades and balancing trade derivatives and constraint management services’.

**Objective and scope of the UK Transmission System Management Principles Statement Audit**

- 11 The objective of our audit is to form an independent opinion, based on our audit work, as to the compliance of National Grid Gas, in all material respects, with the Transmission SMPS in respect of the use of system management services for the Audit Year.
- 12 This Audit Approach has been prepared by PricewaterhouseCoopers LLP and accepted by National Grid Gas as the basis for the current year’s audit, as required in the contractual arrangements in place between PricewaterhouseCoopers LLP and National Grid Gas in respect of this audit.
- 13 The scope of our audit has covered:
- (a) the identification of both National Requirements and Localised Requirements which may trigger the use of system management services; and
  - (b) National Grid Gas’s response to the identification of such a trigger, including any system management services that may have been deployed.
- 14 National Grid Gas’s approach to the identification of trigger points which may require the use of system management actions are set out in Part C of the Transmission SMPS.
- 15 The Transmission SMPS allows National Grid Gas discretion in the timing and nature of the system management services that may be used when a trigger point has been identified. The system management services available to National Grid Gas are described in Part D of the Transmission SMPS and Part C of the Procurement Guidelines. Part B.4 and Part E of the Transmission SMPS describes the principles to be applied by National Grid Gas in determining the timing of the use of system management services and in particular the use of system management services ahead of the gas day.
- 16 In agreement with National Grid Gas we have excluded from the scope of our audit National Grid Gas’s procedures which address the following activities described in the Transmission SMPS:
- (a) Emergency Procedures that National Grid Gas may invoke when, and as defined in, National Grid Gas’s Emergency Procedure documentation described in Part B.6 of the Transmission SMPS;
  - (b) the requirement to notify Users<sup>1</sup> of the impact of the deployment of system management services as required by Part B.5 of the Transmission SMPS;
  - (c) engineering decisions taken in the calculation of constraints on the NTS and the calculation of gas reserve holdings;
  - (d) the requirement to comply with the Financial Services and Markets Act 2000 as stated in Part D.4 of the Transmission SMPS;

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<sup>1</sup> Persons other than National Grid Gas who are contractually bound by the terms of the Network Code.

- (e) engineering decisions made in the selection of the most appropriate system management service to deploy; and
- (f) the management and planning of NTS maintenance and other outages.

17 For the avoidance of doubt, it is not our responsibility to:

- (a) confirm that the Transmission SMPS is consistent with legislation/statutory obligations;
- (b) perform a review or test of the accuracy, integrity or completeness of data received from third parties;
- (c) assess the validity of data processing performed by National Grid Gas's operational and planning systems, specifically iGMS and Gemini systems (we will therefore rely upon the output from these systems); or
- (d) review the accuracy of forecast demand as prepared by National Grid Gas compared to actual demand.

**Audit approach**

18 Our audit work has been planned and undertaken to consider whether:

- National Grid Gas's procedures in respect of the identification of trigger points for the possible deployment of system management services are consistent with the requirements of Part C of the Transmission SMPS;
- National Grid Gas has complied with its internal procedures in respect of the identification of trigger points;
- National Grid Gas's procedures in respect of the deployment of system management services are consistent with the requirements of Parts D and E of the Transmission SMPS; and
- National Grid Gas's action or inaction following the identification of a trigger point is reasonable in that such action:
  - should reduce the potential gas demand/ supply imbalance that has been identified;
  - has not shown any undue bias towards any one particular shipper or provider of system management services; and
  - has complied with National Grid Gas's internal operating procedures.

19 We have assessed relevant internal operating procedures used by National Grid Gas for consistency with the Transmission SMPS. We have also reviewed system management activities undertaken by National Grid Gas against these internal operating procedures to gain assurance that National Grid Gas has operated the NTS in accordance with the requirements of the Transmission SMPS.

- 20 It should be noted that instances of non-compliance with National Grid Gas's internal procedures will not automatically result in a non-compliance with the Transmission SMPS. To the extent that we have identified any such circumstances we have discussed the procedural non-compliance with National Grid Gas's management and assessed whether the procedural non-compliance has had any material financial effect on Users or indicates material bias towards or against any particular User.
- 21 We have designed our testing to provide reasonable assurance that the identification of trigger points and the deployment of system management services during the Audit Year have been carried out in accordance with the areas of the Transmission SMPS within the scope of our audit.
- 22 In undertaking our audit, we have assessed the risk of a material non-compliance of the areas of the Transmission SMPS within the scope of our audit. In areas where we have identified specific risks, or where weaknesses have been identified in the operation of specific internal controls, these compliance tests have been supplemented by substantive tests of detail of the relevant underlying data.
- 23 We have selected a sample of at least 60 gas days for testing in the Audit Year. The selection of the particular days reviewed has been based solely on our assessment of risk. It represents a mixture of "normal" days and other days where we, or National Grid Gas's Business Assurance Team, have identified unusual factors (e.g. system outages) or procedural non-compliances which, in our view, represent a risk as to compliance with internal operating procedures. There were no Gas Balancing Alert days upon which balancing actions were taken, and consequently we were not required to sample test any such days in the Audit Year.
- 24 Throughout our work, we have continued to monitor developments that impact upon the deployment of system management services and, where we have identified a resulting risk in respect of our review, we have assessed the risk and determined an appropriate response.

**Materiality**

- 25 We have planned and performed our review so as to be able to provide reasonable assurance that National Grid Gas has deployed system management services in all material respects in accordance with the Transmission SMPS.
- 26 The assessment of what is material, and therefore what issues, if any, warrant inclusion in the Transmission SMPS Report, is a matter of professional judgement. However, in applying this professional judgement, we have judged a failure on National Grid Gas's part to comply with the Transmission SMPS as being material if, in our opinion, a reasonable professional person, considering National Grid Gas's adherence to the Transmission SMPS in the round, would conclude that National Grid Gas had not complied with the Transmission SMPS if the matter was disclosed to them. In applying this judgement we have taken into account the following factors:
- (a) the extent to which the actual outcome would have been different had the principles set out in the Transmission SMPS been applied;
  - (b) the surrounding circumstances at the time(s) of any failure to comply with the Transmission SMPS;

- (c) the aggregate impact in the Audit Year of any failure to comply with the Transmission SMPS;
- (d) the relative significance of the particular provision of the Transmission SMPS that has not been complied with; and
- (e) National Grid Gas's definition of a Material and Non-material Breach as used internally to assess the significance of a non-compliance with procedures and used as the basis of reporting such matters at meetings with Shippers.

**More detailed description of review work undertaken**

27 The review work that we have carried out can be divided into the main areas shown below.

**Input of Daily Flow Notifications (DFNs), Off-take Profile Notifications (OPNs) and Storage Flow Notifications (SFNs) notifications received from third parties**

28 Input/ conversion of data:

- Review adequacy of key internal procedures and management controls relating to the input of data provided by fax by third parties;
- Review, on a sample basis, evidence of compliance with procedures and controls in respect of the accuracy and timeliness of data input;
- Test, on a sample basis, accuracy and timeliness of conversion (where appropriate) and input of values notified by fax by third parties; and
- Review audit findings identified by the National Grid Gas Business Assurance Team in respect of input of fax data.

**The identification of potential requirement to deploy system management services**

29 For a national requirement to deploy system management services:

- Review adequacy of key internal procedures and management controls relating to the identification of a national requirement to deploy system management services and the consistency of these procedures with the Transmission SMPS; and
- Review, on a sample basis, evidence of compliance with procedures and controls in respect of the identification of a national requirement to deploy system management services.

30 For local requirement to deploy system management services:

- Review adequacy of key internal procedures and management controls relating to the identification of a local requirement to deploy system management services and the consistency of these procedures with the Transmission SMPS;

- Review, on a sample basis, evidence of compliance with procedures and controls in respect of the identification of a local requirement to deploy system management services; and
- Review, on a sample basis, gas pressure data to identify trigger points.

31 Incidents/ exceptions:

- Review audit findings identified by the National Grid Gas's Business Assurance Team in respect of the identification of national and local trigger points; and
- Review, on a sample basis, operational logs/ fault logs for IT systems to check for any system failures that may have resulted in delays in identifying national and local trigger points.

**The deployment of system management services**

32 The deployment of system management services:

- Review adequacy of key internal procedures and management controls relating to the deployment of system management services and the consistency of these procedures with the Transmission SMPS. Internal procedures to be considered will include the Balancing Hierarchies, Energy Strategy and Entry Capacity Strategy;
- Review, on a sample basis, evidence of compliance with procedures and controls in respect of the deployment of system management services;
- Review, on a sample basis, supporting documentation for each use of system management services to check consistency of supporting documentation with system records of actions taken; and
- Perform, on a sample basis, an overall review of system management services deployed to check for any potential bias towards or against a shipper or other provider of system management services.

33 Incidents/ exceptions:

- Review audit findings identified by National Grid Gas's Business Assurance Team in respect of the deployment of system management services; and
- Review, on a sample basis, operational logs/fault logs for IT systems to check for any system failures that may have resulted in delays/ restrictions in National Grid Gas's ability to deploy system management services.

**Maintenance of the integrity of data used in identifying requirements to deploy system management**

- 34 The scope of our review does not include the accuracy of processing undertaken by National Grid Gas's operational systems iGMS and Gemini. However, our review does include controls over the integrity of data held by these and other systems used in the

determination of trigger points and the deployment of system management services. Our review will therefore considered the adequacy of key controls over the following for these systems:

- security administration;
- logical access control;
- physical security; and
- contingency planning.