

SMART METERING IMPLEMENTATION PROGRAMME
RESPONSE TO PROSPECTUS CONSULTATION

28 October 2010

Contents

1. Introduction 3

2. Executive Summary 5

3. The Scope and Role of the DCC 8

4. Arrangements for Non-Domestic Sector 14

5. Arrangements for independent Gas Transporters 16

6. Settlement Arrangements 17

7. Interim Arrangements 19

8. Next Steps..... 20

9. Appendices 21

1. Introduction

- 1.1 This document is xserve's primary response to the Smart Metering Implementation Programme ("the SMIP") Prospectus. We are submitting this document in addition to the initial response that we provided to Ofgem on 28 September 2010.
- 1.2 We are responding in our capacity as the Gas Transporters' Agent with responsibility for delivering on behalf of the large Gas Transporters ("GTs") a range of centralised gas transportation services as defined in the GTs' Uniform Network Code ("UNC") and licence, including maintenance of the GTs' Supply Point Register, Supply Point transfers, gas transportation invoicing and energy balancing invoicing. Further information on the role of xserve is set out in Appendix 1.
- 1.3 The focus of our response is on the issues raised in the Prospectus where we have specific interests and expertise. Our principal focus is on the options for the scope and role of the Central Data and Communications Provider ("the DCC") and the potential impacts and implications of these options on prevailing industry arrangements.
- 1.4 xserve is also responding to the DCC Scope Options Information Request that was issued by SMIP on 14 October 2010. Our response to the Prospectus considers the implications of DCC scope options at a high level, whilst our assessment of the costs and benefits for xserve of the specific options and variations is included in our response to the Information Request.
- 1.5 We are aware that Subgroup 2 of the Data and Communications Group is developing options for interim interoperability arrangements. Whilst these are primarily Supplier led, we are happy to contribute to an assessment of the options and to explore the ways in which the processes that we currently operate might be used to facilitate a timely and cost efficient interim arrangement.
- 1.6 In April 2010, Ofgem requested xserve and other selected industry participants to carry out impact assessments and cost benefit analyses in respect of options for the scope and role of the DCC. Some aspects of this document draw on the response that we provided in May 2010,
- 1.7 Our response includes in its scope the following matters that are raised in the Prospectus:
 - (a) The scope and role of the DCC (Section 3);
 - (b) Arrangements for the non-domestic sector (Section 4);

- (c) Arrangements for independent Gas Transporters (Section 5);
- (d) Settlement arrangements (Section 6); and
- (e) Interim arrangements (Section 7).

1.8 We have reproduced at the start of each Section 3 – 7 the questions from the Prospectus and its supplementary documents that we have considered in our response.

2. Executive Summary

- 2.1 We support the principle of an approach that concentrates the initial scope of the DCC on those functions that are necessary and sufficient to achieve the timely rollout of Smart Meters and to expedite the realisation of the forecast benefits that are set out in the Department of Energy and Climate Change (“DECC”) “Impact Assessment of a GB-wide Smart Meter rollout for the domestic sector” that was published alongside the Prospectus.
- 2.2 We consider that the concentration of DCC obligations on the communications services that are essential for the effective transfer of Smart Metering data would be sufficient to enable the timely delivery of SMIP objectives and the realisation of the large majority of benefits. To support the delivery of the communications services, the DCC’s communications agent(s) will need access to certain data to authenticate user requests. There are established processes for maintaining supply point registration data, a subset of which the DCC’s communications agent(s) would need to access to authenticate meter access and data retrieval requests. We consider that, subject to cost benefit analysis, DCC service provider authentication of meter access and meter data retrieval requests by reference to extracts of registration data already maintained by Network businesses or their agents would be less disruptive than the migration to the DCC of meter registration obligations. Where these extracts are held (by a DCC agent or by Network businesses or their Agents) is a matter of physical practicality and efficiency.
- 2.3 A decision to migrate to the DCC the obligation for meter registration should be based on an objective cost benefit assessment. We understand that, whilst the centralisation of gas and electricity meter registration and supplier switching processes is not a pre-requisite to facilitate rollout and to realise the large majority of forecast benefits, significant benefits for suppliers have been forecast to be realisable through such centralisation. In principle we support the approach being taken by the SMIP to assess the costs and benefits of various DCC scope options, but are concerned that the comparisons may not examine fully the costs and asserted benefits associated with the centralisation of registration functions, nor whether such benefits could be realised through further evolution of existing arrangements. It is important to consider the expected benefits of such centralisation, in particular:
- (a) The extent to which the realisation of these benefits is contingent upon centralisation and the consequent migration of obligations to the DCC;
 - (b) Whether similar benefits may be realisable by optimising existing processes to leverage the improved accuracy and timeliness of metering information that can be expected as smart metering rolls out; and

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- (c) Any additional process changes that would be required, in addition to centralisation, in order to realise the forecast benefits.
- 2.4 In considering the scope options around meter registration and supplier switching, it is also important to recognise the distinction between a switching process that enables the relationship between supplier, meter and address to be amended and the requirements for the contractual relationship between GTs and Shippers to be maintained. Our response to the DCC Scope Options Information Request considers these points in more detail, setting out arrangements that, subject to appropriate framework changes, may facilitate the centralisation of gas and electricity supplier switching processes whilst enabling the Shipper / GT registration processes to continue to operate effectively.
- 2.5 In the event that SMIP concludes that the obligations to operate the Change of Supplier process should migrate to the DCC, we would encourage the careful differentiation of DCC and GT obligations so as to enable Networks to continue to run their businesses.
- 2.6 As with the potential migration of meter registration and Change of Supplier obligations, any decision to migrate to the DCC the obligations relating to the calculation of Annual Quantities and metered volumes should be based on an objective cost benefit analysis. We would expect that a key consideration in such analysis would be the costs and risks associated with operating an enormously complex set of interdependent processes across both DCC service providers and the GT Agent, and an assessment of the extent to which these may be offset by potential DCC centralisation benefits, particularly taking into consideration the potential for processes to be operated by different agents for different sectors of the market.
- 2.7 In order to maintain and ideally improve industry efficiency and to avoid the creation of complexity barriers for new market entrants, market facilitation processes and registration functions should be delivered through a single centralised service provider for the whole market. Where GT obligations migrate to the DCC, these should be discharged by DCC service providers to all sectors (including legacy meters), and 'residual' GT obligations (which would still be substantial) should likewise be discharged to all sectors by the GT Agent.
- 2.8 We consider that any potential changes to settlement arrangements should be considered by the industry as a separate business case and that the proposed Smart Metering Significant Code Review would provide a suitable vehicle for a robust assessment of the business case.

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- 2.9 The rate of meter exchanges during the rollout period is expected to be much greater than during normal operating conditions, and will require the industry to handle significantly increased volumes of data. Minimising the scale of change associated with rollout can contribute to the prevention of data management errors.

3. The Scope and Role of the DCC

Questions considered in this Section

Prospectus Question 9

Do you have any comments on the proposal that the scope of activities of the central data and communications function should be limited initially to those functions that are essential for the effective transfer of smart metering data, such as data access and scheduled data retrieval?

Communications Business Model Question 1

Do you agree that access control to secure centrally-coordinated communications, translation services and scheduled data retrieval are essential as part of the initial scope of DCC?

Communications Business Model Question 2

Do you agree that meter registration should be included within DCC's scope and, if so, when?

Communications Business Model Question 3

Should data processing, aggregation and storage be included in DCC's scope and, if so, when?

Summary

- 3.1 We support the principle of an approach that concentrates the initial scope of the DCC on those functions that are necessary and sufficient to achieve the timely rollout of Smart Meters and to expedite the realisation of the forecast benefits that are set out in the DECC "Impact Assessment of a GB-wide Smart Meter rollout for the domestic sector" that was published alongside the Prospectus.
- 3.2 The concentration of DCC obligations on the communications services that are essential for the effective transfer of Smart Metering data would represent an approach that would be sufficient to enable the timely delivery of SMIP objectives and the realisation of the large majority of benefits, including:
- (a) Minimising the cost, risk and scale of changes to the industry's regulatory and commercial framework, processes and systems, that would be considerably more onerous if the outlined data management and data processing functions were brought into the scope of DCC obligations;
 - (b) Preserving the inherent efficiency, reliability and common user experience of the gas industry's centralised delivery model, that would become fragmented and less

efficient if different elements of an integrated suite of services were undertaken by multiple service providers under multiple industry codes and licences; and

(c) Reducing the risk of the protracted operation of interim arrangements.

3.3 The impact assessment that we provided in May 2010 was made against the DECC Conclusions Document and Impact Assessment that were published in December 2009, but the revised Impact Assessment that was published alongside the Prospectus has not changed our overall conclusions that a “minimum change” approach would:

(a) Be sufficient to enable the realisation of the very large majority (in excess of 95%) of the forecast benefits;

(b) Be achievable at lower cost, with less risk and less complexity, and to a shorter timescale than alternative approaches; and

(c) Make maximum use of existing industry arrangements, systems and processes, and therefore would be expected to be sustainable and workable for the duration of the rollout period.

3.4 We also consider that such an approach could be effective in containing the scale of the data management challenges that Smart Metering rollout is expected to present to the industry. The anticipated rate of meter exchanges during the rollout period is expected to be much greater than during normal operating conditions, and will require the industry to handle significantly increased volumes of asset record updates (potentially including new attributes for Smart Meters) and opening and closing meter reads. There is a risk that the effort required to resolve increased numbers of data handling errors and exceptions will undermine and detract from the true benefits of Smart Metering. Minimising the scale of change associated with rollout can contribute to the mitigation of this risk.

3.5 We understand that, whilst changes to gas and electricity meter registration and supplier switching processes are not a pre-requisite to facilitate rollout and to realise the large majority of the forecast benefits in DECC’s conclusions, significant benefits for suppliers have been forecast to be realisable through such changes. We support the approach being taken by the SMIP to assess the costs and benefits of various DCC scope options, but are concerned that the comparisons may not examine fully the costs to achieve the asserted benefits associated with the changes to registration functions, (i.e. additional changes may be required to achieve the benefits), nor whether such benefits could be realised through further evolution of existing arrangements. It is important to consider the expected benefits of such centralisation, in particular:

- (a) The extent to which the realisation of these benefits is contingent upon the migration of certain obligations to the DCC;
- (b) Whether similar benefits may be realisable by optimising existing processes to leverage the improved accuracy and timeliness of metering information that can be expected as smart metering rolls out; and
- (c) Any additional process changes that would be required, in addition to centralisation, in order to realise the forecast benefits.

Access Control, Translation and Scheduled Data Retrieval Services

- 3.6 We consider that access control, translation and data retrieval services are all essential for the effective transfer of Smart Metering data. It would appear to be a logical and efficient approach that data retrieval services should be driven predominantly by schedules that are determined in advance by those industry participants that require the data, although a data retrieval service could still be made to operate in response to ad hoc requests.
- 3.7 These services are necessary to ensure the security of the Smart Metering system and the data that is held within the system, specifically:
- (a) The integrity and format of data that DCC service providers would make available to industry participants for use in other industry processes;
 - (b) The restriction of access to meters and to meter data to only those parties that have current access rights; and
 - (c) The effective management of transaction volumes and their impacts on the systems of both DCC service providers and other industry participants.

Meter Registration

- 3.8 In order to be able to discharge its obligations to provide the communications services outlined above, the DCC would be required to procure service providers to develop and maintain the capability to authenticate meter access and meter data retrieval requests by reference to the unique relationship for any Comms ID between three key data items, namely the site, the meter, the Supplier. We note that this is similar to the “triangulation concept” that was developed previously by the Customer Transfer Programme.
- 3.9 This could be achieved through a DCC service provider holding these data items, and maintaining them either through updates from existing registration systems or directly from suppliers. Alternatively, it would be possible to carry out authentication by reference to

registration data that is already held and maintained by Network businesses or their agents.

- 3.10 We consider that making relevant sub sets of existing data accessible and available to the DCC for interrogation in order to authenticate Suppliers' meter access and meter read data retrieval requests would avoid the requirement for the DCC to establish and operate its own registration processes.
- 3.11 A decision to migrate to the DCC the obligation to hold and/or update a meter register should be based on an objective cost benefit assessment. Our understanding is that there may be benefits from the DCC acting as a 'single point of contact' for both the gas and electricity markets, and that it is believed that the arrangement may better enable improvements in address and meter asset data quality, although it is not clear how the DCC would be able to resolve data quality concerns to a greater extent than might be achieved by improving current processes.
- 3.12 In the event that the SMIP concludes that the DCC should take on the obligation for meter registration, arrangements would need to be put in place to enable timely and controlled updates to the data items identified in paragraph 3.8. This would require potentially complex interfaces between the DCC and other industry participants, or the migration to the DCC of the obligation to operate the Change of Supplier process. This latter approach would require the DCC to procure service providers (but not necessarily precluding the engagement of existing parties) to develop, operate and maintain significantly larger transaction and data volumes, including interfaces with other industry participants, and would be likely to result in the duplication of some elements of registration records held by different participants. The design of this latter approach should include relevant outputs that would enable GTs to run their Network businesses, and it would therefore be necessary for the DCC to have an obligation to provide the relevant data to the GTs.
- 3.13 The majority of residual GT obligations would continue to be discharged by the GT Agent, and would require the continued maintenance of a large number of supply point data attributes. The scope of these processes would include but not be limited to:
- (a) The Change of Registered Shipper process, that establishes a contract between the incoming Shipper and the GT for the Shipper to take transportation services from the GT in accordance with the provisions of the UNC, and enables the GT to fulfil its licence obligation to maintain a Supply Point Register;
 - (b) For larger Supply Points, the nominations process that allows a prospective Shipper to obtain transportation service quotation information from the GT (with the potential

for multiple nominations from a number of prospective Shippers before initiation of the Change of Registered Shipper process);

- (c) The capacity referrals process that allows the GT to assess the impact on its Network of a request by a proposing Shipper for an increase in peak load; and
- (d) Ensuring that the proposing Shipper is not subject to any sanctions under the Energy Balancing Credit Rules or as a result of restrictions imposed by an individual GT.

3.14 We consider that, subject to cost benefit analysis, DCC service provider authentication of meter access and meter data retrieval requests by reference to registration data that is already held and maintained by Network businesses or their agents would be less disruptive than the migration to the DCC of Change of Supplier obligations. In the event that SMIP decides that the obligations to operate the Change of Supplier process should migrate to the DCC, we would encourage the careful differentiation of DCC and GT obligations and therefore of responsibilities for the discharge of the related services.

Data Processing, Aggregation and Storage

3.15 An assessment of the impacts of the migration of data processing, aggregation and storage obligations to the DCC requires very careful consideration to be given to the impact on the complex and interdependent gas transportation and energy balancing transactional processes and services that currently reside within the scope of GT obligations and are discharged by xoserve.

3.16 DCG Subgroup 1a has discussed a number of possible options for the alternative demarcation of obligation boundaries between the DCC and the GTs (beyond the inclusion in DCC scope of meter registration and transactional processing of Change of Supplier activities). These discussions have recognised the prevailing complexity and interdependency, and the Subgroup has therefore chosen in respect of the gas industry to focus on the implications of the migration to the DCC of obligations relating to the calculation of 'derived energy' (which following discussion with a SMIP representative, we have assumed means Annual Quantities ("AQ"), as reflected in the DCC Scope Options Information Request) and metered volumes.

3.17 As with the potential migration of meter registration and Change of Supplier obligations, any decision to migrate to the DCC obligations relating to the calculation of Annual Quantities and metered volumes should be based on an objective cost benefit analysis. We would expect that a key consideration in such analysis would be the costs and risks associated with operating an enormously complex set of interdependent processes across

both DCC service providers and the GT Agent, and an assessment of the extent to which these may be offset by potential DCC centralisation benefits.

4. Arrangements for Non-Domestic Sector

Questions considered in this Section

Prospectus Question 12

Does the proposal that suppliers of smaller non-domestic customers should not be obliged to use DCC services but may elect to use them cause any substantive problems?

Non-Domestic Sector Question 4

Do you agree with the proposed approach that use of DCC should be optional for non-domestic participants in the sector?

Non-Domestic Sector Question 5

If use of DCC is not mandated for non-domestic customers, do you agree with the proposed approach as to how it offers its services and the controls around such offers?

- 4.1 The optional use of DCC services in a scenario in which the scope of DCC obligations is concentrated on access control, translation and scheduled data retrieval services has little impact on the operation of xserve's services to discharge GTs' obligations to the non-domestic sector. Dependent on the detailed design of industry arrangements, there may be a requirement to maintain in GT systems the identity of the party that is expected to submit meter reads for the purposes of gas transportation processes. This party could continue to be the relevant Gas Shipper (or Shipper's agent), or may be the DCC (or the relevant data retrieval service provider).
- 4.2 In the event that the scope of DCC obligations is extended to include the provision of meter registration and Change of Supplier services, or is extended further to include the provision of Annual Quantity and metered volume calculation services, the optional approach to non-domestic sector use of DCC services would give rise to significant complexity and inefficiency. In order to at least maintain and ideally improve industry efficiency and to avoid the creation of complexity barriers for new market entrants, market facilitation processes and registration functions should be delivered through a single centralised service provider for the whole market. Where GT obligations migrate to the DCC, these should be discharged by DCC service providers to all sectors (including legacy meters), and residual GT obligations should likewise be discharged to all sectors by the GT Agent.
- 4.3 This is a particularly important principle that should be adopted in order to maintain the integrity of the market for energy balancing and settlement purposes, avoiding the need for

creation of an additional process to aggregate the 'positions' of the domestic and non-domestic sectors.

5. Arrangements for independent Gas Transporters

Questions considered in this Section

Regulatory and Commercial Framework Question 14

What arrangements would need to be put in place to ensure that customers located on independent networks have access to the same benefits of smart metering as all other customers?

- 5.1 As the large majority of benefits from smart meter rollout are expected to be derived from customers having Smart Meters installed on their premises, interoperability arrangements should embrace all Networks regardless of their regulatory governance arrangements.
- 5.2 Whilst our services are concerned primarily with market facilitation and have only a limited interface with end consumers, we consider that, under a “minimum change” approach outlined in Section 3, we would be able to contribute to realisation of this principle through facilitating DCC service provider access to independent Gas Transporters’ (“iGTs”) supply point registration data for the purposes of authenticating Suppliers’ meter access and meter data retrieval requests.
- 5.3 In the event that the scope of DCC obligations is extended to include the provision of a Change of Supplier service, or is extended further to include the provision of Annual Quantity and metered volume calculation services, we consider that the principle that market facilitation processes should be delivered through a single centralised service provider for the whole market could be extended to embrace iGT arrangements.

6. Settlement Arrangements

Questions considered in this Section

Prospectus Question 14

Have we identified all the wider impacts of smart metering on the energy sector?

Regulatory and Commercial Framework Question 13

Are there changes to settlement arrangements in the electricity or gas sectors that are needed to realise the benefits of smart metering?

Regulatory and Commercial Framework Question 15

Are there any other industry processes that will be affected by smart metering and which the programme needs to take into account?

- 6.1 It is our understanding that the benefits of Smart Metering as set out in DECC's Impact Assessment do not include in their scope any benefits that may arise from changes to settlement arrangements. As such, we consider it appropriate for the industry to assess as a separate business case potential changes to settlement arrangements and the industry costs and benefits that may accrue.
- 6.2 We have responded previously to Ofgem's open letter in respect of potential Significant Code Reviews, with a particular emphasis on the proposal for a review of the impacts of Smart Metering on wider industry processes ("the Smart Metering SCR"), specifically including settlement arrangements.
- 6.3 We concluded that:
- (a) The Smart Metering SCR would provide a suitable vehicle for a robust assessment of the business case for potential changes to settlement arrangements;
 - (b) In order to ensure the integrity of both the commercial balancing of the system and the delivery of GTs' wider obligations, consideration should be given to industry process impacts for all Supply Points; and
 - (c) The establishment of the Smart Metering SCR would provide a good focal point for the aspirations for the use of Smart Metering data in UNC processes that have been developed by the Project Nexus UNC Workstream and supporting Topic Workgroup meetings, as facilitated by xserve. Further information is available from the Joint Office website.

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- 6.4 We would also encourage the SMIP to undertake a review of the potential implications for the Reform of Gas Metering arrangements, including the impacts on cross-industry processes and data flows.

7. Interim Arrangements

Questions considered in this Section

Communications Business Model Question 4

Do any measures need to be put in place to facilitate rollout in the period before DCC service availability and the transition to provision of services by DCC, for example requiring DCC to take on communications contracts meeting certain pre-defined criteria?

- 7.1 In our initial response to the SMIP Prospectus that we submitted to Ofgem on 28 September 2010, we commented on the need to give attention to Smart Meter data management arrangements both during the period between rollout commencement and DCC go live (“the interim period”) and at DCC go live itself.
- 7.2 We concluded that:
- (a) In order to maintain the efficient operation of industry processes during the interim period, it is essential that, prior to rollout commencement, the SMIP defines in respect of the interim period both the data that needs to be captured and the participants, processes and systems to which this data needs to be made available; and
 - (b) Prior to DCC go live, the SMIP should define:
 - (i) The data that will need to be either made accessible or migrated to DCC service providers in order to enable DCC go live; and
 - (ii) The identities of the industry participants responsible for the provision of that data to DCC service providers.
- 7.3 DCG Subgroup 2 is developing options for interim arrangements. Whilst these are primarily Supplier led, we are happy to contribute to an assessment of the options and to explore the ways in which the processes that we currently operate might be used to facilitate a timely and cost efficient interim arrangement.

8. Next Steps

- 8.1 We would very much welcome a clear statement of conclusions from the SMIP on the initial scope of DCC obligations, how it is envisaged that these will be delivered and, to the extent that these are to change in the future, a roadmap that describes the timing of and conditions for any future change from the initial scope. This insight is essential to understand the impact on the future scope of our GT Agent services and to give context to our stakeholder engagement activities and systems investment plans, particularly as we approach RIIO-GD1 and RIIO T1.
- 8.2 We are keen to continue our engagement with the SMIP to contribute our knowledge, skills and experience to determining the best way forward for the industry on the scope and role of the DCC.

9. Appendices

Appendix 1 - The role of xoserve

xoserve is appointed by the principal Gas Transporters of England, Wales and Scotland as their common agent to deliver a range of centralised gas transportation services as defined in the Uniform Network Code (“UNC”). The UNC governs the arrangements for the provision of transportation transactional services by Gas Transporters to Shippers, and the principal role of xoserve is to deliver those services on behalf of the Gas Transporters. xoserve also provides services which fulfil a range of Gas Transporters’ obligations as defined in their regulatory licences. Services are concerned primarily with the management of the register of Supply Points connected to the Gas Transporters’ networks and the preparation and submission of transportation and energy balancing invoices to Shippers.

In addition to the provision of transactional services, a key element of the common agent role is the management of changes to these services, principally driven by Modifications to the UNC and/or Gas Transporters’ licences.

Both the transactional and change management services delivered by xoserve are fundamental to the efficient commercial operation of the gas industry and essential to enabling gas supply competition in Britain.