Promoting choice and value for all consumers

Email: smartmetering@ofgem.gov.uk

Date: 3 March 2010

Dear Stakeholders,

Smart Metering Implementation Programme – Data and Communications Function Workshop 8 March 2010

We have attached a summary of information that we plan to use as the basis for discussions at the workshop on the Smart Metering Data and Communications Function.

The following information is included:-

- Information about workshop structure; and
- Suggested discussion material for workshop breakout sessions relating to the activities, structure and realisation of the Data and Communications function.

Invitations were issued for this event, which is now fully subscribed. We ask that workshop participants consider this material before the workshop.

We would also welcome views from other stakeholders, who are invited to submit written comments to us at smartmetering@ofgem.gov.uk ahead of the workshop.

Yours sincerely

NEIL BARNES
Head of Smart Metering Policy

- **Workshop Structure**

The Government has decided on a Central Communications Model for the Smart Meter rollout under which communications are coordinated centrally. The aim of this workshop is to discuss topics and issues arising out of this decision related to the activities, structure and realisation of the central Data and Communications function, and obtain the views of stakeholders.

During the day, time will be allotted for plenary sessions and also smaller breakout group sessions. The agenda for the day is as follows:

10.00	Welcome and introduction to stakeholder workshop
10.30	Break-out session 1 - Data and Communications function activities
12.15	Feedback to all
13.00	Lunch
14.00	Introduction to afternoon session
14.15	Break-out session 2a - Data and Communications function structure
15.00	Break
15.15	Break-out session 2b - Data and Communications function realisation
16.00	Feedback to all
16.45	Closing remarks

For the breakout sessions, participants will be divided into four groups. We plan to address the same content in each of the breakout groups. Each workshop participant will be allocated in advance to a specific group. Each group will have a chair (from the stakeholder group) and a facilitator (Ofgem). Our aim is to ensure that a range of interests are represented in each breakout group.

The breakout session in the morning will cover the activities of the Data and Communications function. The session will consider the scope of activities, the potential for future development and the implications for existing industry arrangements and stakeholders. The aims of this session are to:

a. Gain stakeholder feedback on the range and scope of the Data and Communications function's activities
b. Assess stakeholder's views regarding the impact of change on existing industry processes.

The breakout sessions in the afternoon will cover in two sections. the structure and realisation of the Data and Communications function The first section will consider the how the data and communications entity that supports the Smart Metering rollout should be structured, its role, if any, in relation to the customer premises,

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and the approach to competitive procurement of communications services. The second section will consider how the Data and Communication function will be established, the framework in which it will operate, and interdependencies. The aims of the afternoon sessions are to:

a. Gain stakeholder feedback on possible approaches to the structure and realisation of the Data and Communications function
b. Highlight any constraints on technology options.

The breakout sessions will be followed by plenary sessions of all participants where the chair will provide feedback to the main group on each of the breakout group discussions.

As background some prompt material is attached to this letter. Please note that these ideas and the order in which they are presented do not reflect any existing preferences and are not exhaustive. This information should facilitate discussion and stimulate the forming of viewpoints from all stakeholder perspectives.

Ofgem will not produce detailed minutes for the workshop but we intend to publish headline outputs of the discussions as soon as possible after the workshop.

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Discussion material

Data and Communications Function Activities – Morning Session

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Benefits required from the Smart Metering scheme

Benefit		Value £m
Consumer benefits		**6,990**
	Energy saving	4,464
	Load shifting	617
	Reduced losses	194
	TOU tariffs	358
	Avoided cost of carbon	1,356
Supplier benefits		**6,272**
	Avoided meter readings	2,662
	Inbound enquiries	957
	Customer service overheads	166
	Debt handling	976
	Avoided PPM COS premium	906
	Remote (dis)connection	222
	Avoided site visit	383
Other benefits		**1,361**
	Reduced losses (networks)	194
	Reduced theft	103
	Microgeneration	33
	Customer switching/ NSS	1,031
Total		**14,622**

- The central data and communications function is a vital element in the delivery of these benefits
- The Impact Assessment highlights the opportunity for service providers:
  - Providing connectivity to 27m+ households
  - Managing access to 52m+ meters
  - Charging £4.80/ household/ year for communications services

Source: "An Impact Assessment of a GB-wide smart/ advanced meters rollout to the domestic sector" DECC, December 2009

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Key issues to be addressed…..

- What are the essential Day 1 activities and what could be left until later?
- Whether meter registration is done centrally and, if so, on what basis?
- If meter registration is undertaken, how is transfer of data to be done?
- To what extent the change of supplier process is amended?
- Basis for activity in different market segments (domestic/SME)?
- To what extent should the HH/DM functionality of smart meters be used in settlement?

… and also need to consider interdependencies

HH= Half Hour; DM = Daily Metered

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What should the data function do on Day 1 and what should be done later?

Some possible approaches (incremental)

- Enable access to meters by suppliers via central comms
- Data retrieval and delivery
- Take on role of DC in electricity and AQ calculation in gas
- DA in power for relevant meters
- Volume allocation to suppliers

Some considerations

- What can be done more efficiently centrally and what is best left as it is now?
- What are the implications for management of the communications network?
- Is there potential to reduce "hand offs" between players by centralising roles?
- What are the risks of storage of data at national level?
- What are the implications for dual running during roll out?
- What about the impact on industry systems?

DC = Data Collector,; DA = Data Aggregator; AQ= Annual Quantity

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Whether meter registration is done centrally and, if so, on what basis?

Some possible approaches

- No change – data function is a user of existing SPA/MPAS functions
- Establish centrally for smart meters as agent of electric and gas network companies
- Responsibility for meter registration moved from network companies to new body under common governance

Some considerations

- Implications for network management
- Scope to expand data which is held centrally to reduce hand offs
- Linkages to change of supplier process
- Scope to achieve convergence between gas and electricity
- Impact on existing industry data flows
- Access for network companies for other reasons

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If meter registration is undertaken, how is transfer of data to be done?

Some possible approaches

- Migrate all data ready for Day 1 for relevant meters
- Add smart meters to a new register as installed and leave existing meters on legacy registration systems
- Migrate when roll out is complete

Some considerations

- Implications for network management
- Possible change in scope of data held in central register
- Read across to Project Nexus and any other industry projects
- Responsibility for inaccuracies in existing data
- Impact on existing industry data flows
- Can a new common registration database be delivered in time for Day 1
- Tipping point for close down of legacy systems

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Whether and to what extent the change of supplier process is amended?

Some possible approaches

- Leave unchanged except for meter read
- Keep separate processes for gas and electricity under MRA and SPAA but reform for smart meters (e.g. objections in relation to debt)
- Create new converged process under common governance

Some considerations

- Smart meters offer opportunity to simplify process
  - Accurate closing/opening meter reads on change of supplier
  - Better ability to manage debt
- Scope to keep more data on a central basis to reduce hand offs
- Dual vs single fuel supply competition
- Third directive requirements for 3 week customer transfer
- Risks associated with major industry change and possible impact on timing of roll out
- How will it work during transition

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Should suppliers be required to use central comms for SM non-domestic customers?

Some possible approaches

- Mandate from Day 1
- Leave choice to suppliers (central communications required to offer terms)
- Keep option to mandate open with commitment to give X years' notice

Some considerations

- Implications for existing supplier communications contracts?
- Implications for inter-operability and competition in supply?
- Value of supplier choice as an indicator of central comms efficiency?
- Economies of scale in data and comms functions?
- Provision of data for smart grid purposes?
- Need for dual systems if SME not mandated to use central comms?

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Smart meters will have HH/DM functionality – how should this be used in settlement?

Some possible approaches

- HH/DM settlement not permitted before 2020 and issue is then reviewed again?
- HH/DM settlement is an option to support more complex tariff options but is not mandated
- HH/DM settlement starts as soon as smart meter is operational
- Possible hybrid approaches e.g. HH/DM data, transferred weekly

Some considerations

- Impact on DC/DA and on xoserve/ Elexon systems
- Extent to which HH/DM settlement is needed to support more complex TOU tariffs
- Potential implications of moving from standard profiles to HH/DM settlement for different types of domestic consumer

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Interdependencies and phasing

- Is impact on industry processes and systems understood?
- What are the main interdependencies?
- What should be ready for Day 1?
- What could be left until the roll out process is well established?

Prepare for feedback

There are a number of key questions that need to be addressed when considering these issues:

1. What are the essential changes needed to deliver the benefits identified in the DECC impact assessment?
2. Is there a trade off between doing more on Day 1 and speedy delivery?
3. How best to take account of the interests of network companies (e.g. for smart grids) and other potential users such as ESCOs?
4. How can the smart metering implementation programme provide future flexibility without compromising cost/ benefit case?
5. Should the services offered by the Data and Communications function be structured differently with respect to gas and electricity?
6. What are the service level requirements that the Data and Communications function should offer to users – for example key principles on reliability, security, frequency, interoperability, third party access, flexibility, adaptability and charging arrangements?
7. What needs to be mandated and what can be left to the market?

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Key issues to be addressed…..

- What structure should the Data and Communications function take?
- What should be the approach to competitive procurement of the communications for Smart Metering?
- Who should own and control the comms module in the premises?
- What is the best way to establish the Data and Communications function?
- What framework is required to manage and incentivise the Data and Communications function?

… and also need to consider interdependencies and potential timing considerations

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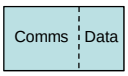
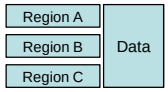
Some possible structures of the Data and Comms function

Integrated Data and Comms function	**Separate Data and Comms functions**	**Multiple regional instances of Comms function**
 "DataCommsCo"	 "CommsCo" "DataCo"	
• Data and Comms functions together as a single entity with requirement for delivering an end-to-end service	• Data and Comms functions separate • Should data function have responsibility for managing end-to-end service and relationship with service users? • Should data function carry out service management and integration for the Smart Metering service?	• As before but Comms functions have a regional basis?

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Some approaches to competitive procurement of technology

- Specify technology and carry out tender for service provider to run WAN
- Carry out tender for service provider to define and run WAN
- Appoint aggregator to develop and manage multi-operator WAN
- Other approaches?

Some approaches to arrangements for the comms module in the house

Owned by Comms function	Owned by supplier
	
• Comms module owned by the Comms function • Comms function responsible for end-to-end control of the WAN • Supplier carries out installation and simple maintenance of the comms module of behalf of the Comms function • Appropriate SLAs manage the relationship between the supplier and the Comms function	• Comms module is owned and maintained by the supplier • Comms function is responsible for ensuring the link to the comms module is in place and testing the connectivity of the comms module • Supplier is responsible for responding to alerts from customers and Comms function regarding the availability of communications to the home • Appropriate SLAs manage the relationship between the supplier and the Comms function

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Under EA 2008, DECC has powers to modify licences and to establish new licensable activities

- What is the best way to establish the data and comms functions?
- Does it need to be a separate licensable activity?
- If not, who would be best placed to set up the functions
- What would be the respective roles of the different parties under the different approaches:
  - DECC and Ofgem
  - Electricity supplier and gas suppliers/shippers
  - DNOs and Gas Transporters
  - Existing industry bodies (e.g. National Grid, Elexon, xoserve, Electralink)

What framework is required to manage the Data and Communications function?

- What are the main obligations to be fulfilled?
- How to ensure compliance with these obligations?
- How will the activities be funded?
- How to incentivise efficient operation?
- How to manage risks?
- What are the most appropriate governance arrangements?

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Interdependencies

- What are the main interdependencies?
- Are there any avoidable constraints on technology?
- What should be ready for Day 1?
- What could be left until roll out process is well established?

Prepare for feedback

There are a number of key questions that need to be addressed when considering these issues:

1. How to provide certainty to encourage development and maintain flexibility to respond to technology, commercial or regulatory change?
2. How to maintain contestability and deliver against a centralised operating model?
3. How to bring the Data and Communications function into being as quickly as possible and how to manage it (for example, data first followed by comms)?
4. How to ensure that the benefits of Smart Metering are realised by the development of the Data and Communications function, on time and efficiently?
5. How to ensure that the opportunity offered by the Data and Communications function is best packaged for potential providers?
6. How to incentivise the Data and Communications function service provider and allocate risks appropriately?
7. How to ensure that the range of possible solutions for Smart Metering communications is not unduly constrained?

Criteria for assessing approaches:

- Economic efficiency - implications for costs and benefits
- Industry impact - promoting competition and industry simplification
- Consumer impact - engagement, behaviour change, protection
- Meeting 2020 objective
- Risks
- Consequential impacts - implications for other issues or policy questions.

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