

SMG Sub-Group 3 - Premise roles and responsibilities

This memo discusses a number of issues set out in the Smart Metering Regulatory and Commercial Framework document related to the roles and responsibilities for installation and maintenance of smart meters and related equipment in customer premises.

From Smart metering programme
 To SMG Sub-Group 3 members
 cc
 Date 16th September 2010

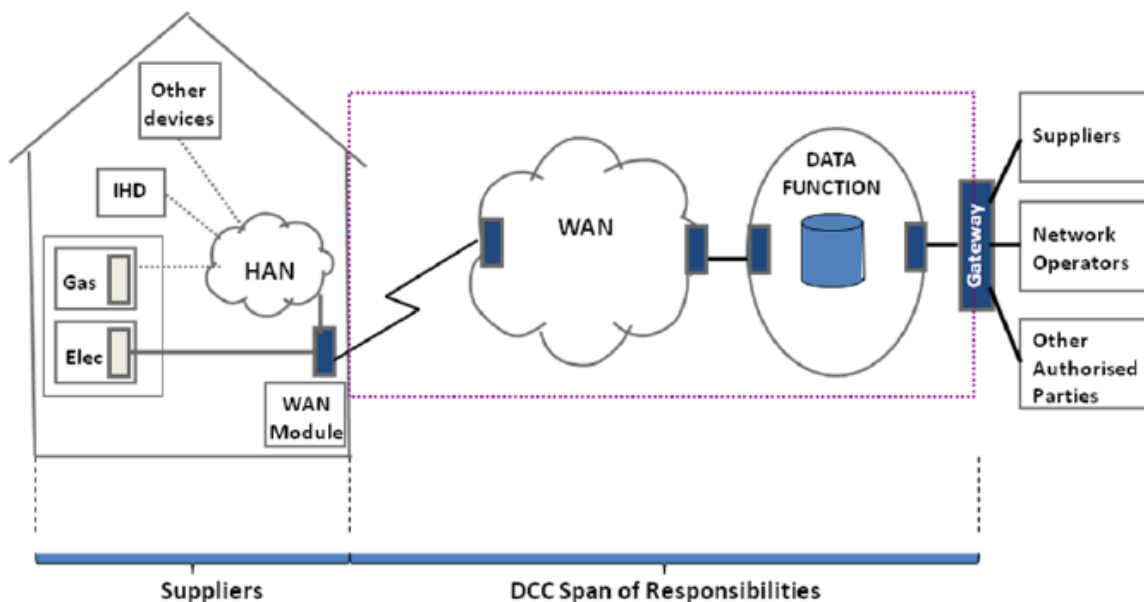
Introduction

1.1. This memo discusses a number of issues set out in the Smart Metering Regulatory and Commercial Framework supporting document¹ related to the roles and responsibilities for installation and maintenance of smart meters and related equipment in customer premises.

Responsibilities and obligations in relation to smart meters and associated equipment

1.2. Our proposed responsibilities for different elements of the smart metering system are set out in Figure 1 below.

Figure 1: Proposed smart metering responsibilities



1.3. The DataCommsCo (DCC) will act as a data and communications procurement and contract management entity primarily responsible for providing a wide area network (WAN) that reaches all domestic customer premises.

1.4. Under the 'supplier hub' principal, suppliers will have responsibility for the installation and maintenance of smart meters. This means the supplier will be responsible for metering and metering services, although it might discharge these responsibilities through an agent.

¹ Smart Metering Implementation Programme: Regulatory and Commercial Framework, Ofgem E-Serve, July 2010

1.5. Our proposal, as set out in the Smart Metering Regulatory and Commercial Framework supporting document, is that suppliers will also be responsible for the WAN communications module at the customer premises, the home area network (HAN) that enables communications with other smart meters within the premises, an in-home display (IHD) and other shared devices and equipment.

1.6. The proposed allocation of responsibilities aligns with suppliers' existing presence at premises and relationships with customers. Under our proposals, only a single party (suppliers) will require access to customer premises, with the DCC purely a procurement and contracting entity responsible for procuring and contract management of WAN services.

1.7. The allocation of responsibilities also means that installation and maintenance risk of both smart meters and associated shared equipment within the customer premises are all with the same party.

Responsibilities for installation and maintenance

1.8. Gas and electricity suppliers will retain responsibility for installation and maintenance of smart meters under the supplier hub principle. This raises the question of which supplier should be responsible for the installation and maintenance of the shared smart metering infrastructure equipment. Our Regulatory and Commercial framework document considered three options:

- **Option 1:** Separate smart metering systems are installed for each fuel. This would mean that the opportunity for shared infrastructure could not be taken.
- **Option 2:** Arrangements are put in place that facilitate the sharing of assets installed by one supplier with the customer's other supplier.
- **Option 3:** The electricity supplier will be required to install its smart meter and supporting systems in the customer premises ahead of the gas supplier. Under this approach, the electricity supplier would always be responsible for provision and ongoing maintenance of the shared assets.

1.9. The supporting document set out a number of variants of Option 2, the key features of which included:

- The lead supplier, i.e. the supplier that installs its smart metering system first, would be responsible for installation of the shared assets and also the ongoing maintenance of the assets.
- Costs of the lead supplier's WAN communications module would be shared through charges applied by DCC to each supplier.
- The delineation of responsibilities between gas and electricity suppliers remains unchanged if the customer changes one (or both) of its suppliers.²
- The DCC would maintain a database of which fuel supplier would be responsible for the ongoing maintenance of the shared assets.
- If a customer that was previously supplied by a dual provider switches to separate suppliers, then the default position would be that the electricity supplier would be responsible for the ongoing maintenance of the shared assets.

² That is, if the gas supplier was the lead supplier and the customer subsequently changes its gas supplier, responsibility for provision and ongoing maintenance of the shared smart metering infrastructure passes to the customer's new gas supplier.

1.10. A further possible variant of Option 2, proposed in the Regulatory and Commercial framework document, is to have an arrangement where if the gas supplier is the first to install, the responsibilities related to the common equipment is transferred to the electricity supplier when the electricity smart meter is installed.

1.11. The criteria we used to evaluate each of the considered options were: customer impact; cost; time; risk and benefits delivered. A summary of our evaluation against each of the criteria is provided in Annex A to this note.

1.12. Although it would provide for a very clear delineation of responsibilities, a significant issue with Option 1 is that, even if duplicate assets were limited to that part of the market which presently has single fuel suppliers, we estimate it would add around £600 million to the costs of the programme.

1.13. Option 2 has the benefit of reducing duplication of the smart metering systems within the customer premises and thus reducing costs. Option 2 does, however, have the drawback of complicating where the responsibility for installation and maintenance of the equipment within the customer premises lies, for example, as a result from the supplier switching process, and would require detailed systems and processes to ensure the effectiveness of the arrangements. Suppliers having the responsibility for the WAN module (and other smart metering shared equipment) ensures that there is a single responsible body for the installation and maintenance of shared infrastructure in the transition period prior to and post DCC establishment thus avoiding the need for different interim and enduring arrangements.

1.14. Option 3 has similar benefits as Option 2 of avoiding certain additional costs from duplication of smart metering systems. A material disadvantage, however, is that Option 3 would deny the gas supplier the opportunity to roll out smart meters first or optimise gas smart meter rollout plans and could thus have implications for retail competition and for the delivery of the programme.

1.15. We rejected Option 1 on cost grounds. The choice between Options 2 and 3 requires a trade-off between the greater complexity of Option 2 and the risk of slowing down gas meter rollout under Option 3.

1.16. On balance, we proposed that Option 2 is adopted.

Delineation of responsibilities between suppliers and DCC

1.17. The roles and responsibilities of energy suppliers, the DCC and its associated service providers (for example, with respect to the WAN communications module) will need to be clearly defined in the new Smart Energy Code.

1.18. Appendix 4 of our Regulatory and Commercial framework document examined the issues of procurement and ownership of the WAN communications module (a summary of which is provided in Annex B). However, there are other issues, such as the arrangements and responsibilities for faults, which still need to be considered.

1.19. Building on the proposals set out in the prospectus, a set of arrangements for identifying the obligations and responsibilities of energy suppliers, the DCC and its associated service providers, need to be considered as part of the development of the Smart Energy Code.

1.20. We welcome views on how this could be most effectively achieved through the subgroup.

Questions and issues for discussion

1.21. We welcome views on what a workable set of arrangements might look like. These will need to be reflected in the regulatory and commercial framework document including the new Smart Energy Code.

1.22. Do you agree with the proposals concerning the roles and obligations of suppliers in relation to the WAN communications module?

1.23. Do you agree with the proposal that the WAN and the HAN in customer premises should be shared infrastructure, with the installing supplier retaining responsibility for ongoing maintenance?

1.24. If not, would you prefer to have an arrangement by which if the gas supplier is the first to install, responsibilities for the common equipment is transferred to the electricity supplier when the electricity smart meter is installed?

1.25. What set of arrangements could be adopted for identifying the detailed obligations and responsibilities of energy suppliers, the DCC and its service providers, and how these would apply in the new Smart Energy?

Annex A: Evaluation of shared infrastructure commercial arrangements

Criteria	Evaluation
Customer impact	<p>Option 1 would provide the clearest delineation of responsibilities for installation and ongoing maintenance of the smart metering infrastructure in the customer premises. It would minimise the likelihood of uncertainties over supplier responsibilities impairing the customer experience. However it could lead to customer irritation about the volume of equipment that needs to be installed in the premises.</p> <p>Option 2 would lead to a sharing of assets and allocation of responsibilities for installation and maintenance of relevant equipment between two suppliers. While delineation of responsibilities can be made clear, the complexities of the processes related to this option might adversely affect the customer experience.</p> <p>Option 3 would see the responsibilities more clearly delineated than Option 2. However, as it would prevent the gas smart meter being installed ahead of the electricity smart meter it is likely to inhibit the rollout and early adoption of gas smart meters.</p>
Cost	<p>Option 1 would lead to significant costs to customers.</p> <p>Option 2 should lead to no, or a very small cost to customers, as a result of the need for DCC to maintain a database. Option 2 will, however, lead to additional costs being incurred by gas suppliers that install gas smart meters ahead of the installation of electricity smart meters.</p> <p>Option 3 should lead to no additional cost to customers.</p>
Time	<p>Options 1 and 2 should meet the rollout target date.</p> <p>Option 3 could slow the pace of rollout of gas smart meters. In extremis, it could potentially threaten the timely delivery of the programme.</p>
Risk	<p>Option 1 and Option 3 carry the least risk, as responsibilities are very clearly defined. Option 2 could be more risky as responsibilities will depend on which supplier installs the smart meter in the household first and will vary on a premises-by-premises basis, which might create some uncertainty. However, to mitigate the risks with this option, detailed consideration of responsibilities will be considered in the next stage of our work.</p> <p>Options 1 and 2 might marginally increase the risk of electricity theft as the provision of a separate WAN communications module for the smart gas meter would require an external power source that could be more easily tampered with.</p>
Benefits delivered	<p>Options 1 and 2 have most flexibility in terms of business model. Option 1 requires limited intervention. Option 2 would require regulatory intervention to set out the detailed arrangements.</p> <p>Option 3 requires regulatory intervention to mandate that the electricity supplier must install its meter first. Option 3 could provide electricity suppliers with an advantage over gas suppliers in retail competition.</p>

Annex B: Responsibility for WAN Communications Module

The Smart Meter “Statement of Design Requirements” supporting document proposed that meter metrology and the WAN communications module (WAN module) should not be integrated.

Appendix 4 of the Smart Metering Implementation Programme: Regulatory and Commercial Framework document considered who should be responsible for the provision and maintenance of the WAN module.

Responsibility for the provision of and maintenance of the WAN module could be with:

- Energy suppliers; or
- The service provider (s) contracted by DCC (the ‘Service Provider’).

Table 1 below sets out the key arguments for WAN module ownership by energy suppliers or by Service Providers.

Arguments for WAN CPE responsibility being with Energy Supplier or Service Provider

Arguments for Energy Supplier responsibility	Arguments for Service Provider responsibility
<ul style="list-style-type: none"> ▪ Aligns with suppliers’ presence at premises and relationships with consumers ▪ Aligns with supplier installation and field maintenance activities ▪ Exposes WAN module costs to competitive pressures as suppliers have incentives to minimise WAN module costs (both with respect to procurement costs generally and the selection of lowest cost options if alternative WAN technologies are deployed and available) ▪ Provides continuity and easier transition from pre-DCC deployments ▪ Responsibility for WAN module and risk of inventory loss or damage during rollout are best aligned ▪ Financing mechanisms with Meter Asset Providers could be extended to cover WAN module costs 	<ul style="list-style-type: none"> ▪ Aligns with Service Providers’ understanding of technology risks: for example, due to obsolescence³ and design failure⁴ ▪ Aligns with Service Providers taking responsibility for technical performance service level agreements across the WAN (core network to premises) ▪ Procurement by Service Providers may be more cost effective due to economies of scale from Great Britain-wide smart metering volumes and Service Providers’ greater buying power for telecoms devices generally ▪ No WAN module asset ownership change is needed on change of energy supplier ▪ Provides a more neutral basis for wider service development over time (e.g. water metering and Communications services such as telecare).

³ Obsolescence risk here means the risk that the WAN module may, over time, become out-dated technology and no longer able to fulfil its communications function cost effectively

⁴ Failure risk here means that a significant number of devices fail due to a design flaw; i.e. there is a ‘pattern of failure’ beyond an expected (and very low) level of unit failure.

These arguments are now assessed against the programme criteria:

- **Consumer impact:** There is no difference between the options against this criterion. Under both options it would be the energy supplier that retains the relationship with the consumer; Service Provider inputs would be in the background.
- **Cost:** The arguments point to lowest costs being achieved if energy suppliers own the WAN module. This choice exposes the costs to competitive pressures. The potential for Service Providers to leverage economies of scale could still be harnessed by enabling them to offer WAN modules for sale without exclusivity. Energy suppliers would have the option to source units from Service Providers or other vendors manufacturing within the agreed specification and accreditation process;
- **Timeframe:** There is no difference between the options with respect to delivery to the rollout target or front-loading of benefits;
- **Benefits delivered:** (While the energy supplier responsibility option would require responsibility to be transferred on change of supplier, this is similar to commercial interoperability for the meter itself. Service Provider responsibility for the WAN module could provide a more neutral base from which to consider the development of wider services over time (e.g. water, healthcare, and other value-added services).
- **Risk:** Technical performance across the WAN could be handled contractually under either option. Under the energy supplier responsibility option, Service Providers could be required to commit to coverage obligations for a range of meter point condition reference cases (e.g. 'standard meter installation', 'semi-concealed gas meter', 'extended reach to meter'). Similarly, the issues associated with technology obsolescence and design failure risk could be handled contractually under either option. Under the energy supplier responsibility model, contractual arrangements with the Service Provider via DCC could be used to address these risks. Alignment with energy supplier presence at the premises, responsibility for meter and IHD assets, suppliers' rollout responsibilities and established asset funding models mean supplier responsibility provides a more straightforward implementation model.

The above analysis shows that there are arguments for both options. On balance, we propose that energy suppliers should be responsible for the WAN module rather than Service Providers. However, under either option arrangements would need to be put in place for locating and resolving any faults or service issues.

This will require clear delineation of responsibilities and obligations between energy suppliers, the DCC and its associated Service Providers.