

Engage Consulting Briefing Note: Smart Metering Implementation Programme: Government Response to Prospectus Consultation

Introduction

This briefing note summarises the content from the Government's response to consultation on the proposals set out in the July 2010 Prospectus for the Smart Metering Implementation Programme, published 30th March 2011.

We intend it to be used to inform interested stakeholders and to summarise proposed Government policy in a short, easily accessed document.

Executive Summary

The Government has reconfirmed its commitment to the rollout of electricity and gas smart meters to all homes and small businesses in Great Britain, including:

New obligations on energy suppliers to deliver the rollout;

- The Government's intention is to consult on an obligation on suppliers to effectively complete the rollout of gas and electricity smart metering in 2019;
- Next phase of the programme to include arrangements to support the technical and commercial interoperability of smart metering equipment, and to support testing by industry of equipment, systems and processes;
- The Government does not currently propose to obligate suppliers to install smart meters during the 'foundation' stage and there are no volume targets set; and
- From the start of the mass rollout, currently envisaged to be in the second quarter of 2014, meters installed, whether new or replacement, should be compliant with the required technical specifications.

Setting the technical specifications for smart metering

- The Functional Requirements Catalogue sets out the minimum requirements that the smart metering system must provide;
- Suppliers are to provide their domestic customers with a standalone display device capable of delivering near real-time information on their energy consumption;
- Functional requirements will be converted into technical specifications against which meters can be manufactured at volume from late 2012; and
- The Government will develop arrangements for the governance of the technical specifications, such that they can evolve over time.

Establishing the DCC

- Data and communications in the domestic sector should be managed centrally by a new, licensed Data and Communications Company (DCC).
- DCC will be regulated by Ofgem;
- DCC should be granted its licence following a competitive process run by the Government. Its service levels and means of recovering its costs will be regulated. It will be required to be independent from its contracted service providers, who in turn will need to be appointed following appropriate competitive processes;
- The procurement process for the first generation of communication and data service contracts will be initiated in parallel with the process to grant DCC's licence. This supports a process whereby, under current plans, DCC starts providing services to the market at the end of the first quarter of 2014;

- In the first instance, DCC's scope of activities should be limited to secure communications, access control, scheduled data retrieval and translation services; and
- DCC will subsequently take on the role of meter point/supplier registration (expected to be introduced in 2-3 years from DCC service commencement).

Consumer engagement and protection

- All energy suppliers to establish and comply with a new code of practice governing smart metering installations at customer premises. This licence-backed code will include restrictions on unwelcome sales activities and require suppliers not to impose upfront or one-off charging for smart metering equipment;
- Consumers will have a choice over how their consumption data is used and by whom, except where data is required to fulfil regulated duties. The Government can see the strength of the arguments for requiring suppliers to obtain explicit consent from consumers for access to other data, although further analysis is required to understand the impact of different approaches for data use and achieving consent;
- The Government will develop a consumer engagement strategy. As part of this, there is a strong case for some elements of consumer engagement to be carried out centrally or on a coordinated basis. Further work will be carried out in the next phase;
- The Government will not set specific priorities for groups of consumers as part of the early stages of the rollout process. Instead, the need for such measures will be kept under review as the rollout progresses;
- The remote functionality of smart meters will allow switching between payment methods (credit or prepayment). Payment options should also become more flexible (e.g. top-ups over the phone, via the internet, etc.), promoting a wider pay-as-you-go market. Consumers will still be able to top-up with cash at payment outlets; and
- Consumers will benefit through alternative approaches to debt management, potentially including load-limiting measures (such as "trickle" or limited duration disconnection) and immediate reconnection when a debt is paid off.

Business Case

- Approximately 54 million meters will need to be replaced, involving visits to over 29 million households and businesses. The new 'smart' meters will replace existing 'dumb' meters. The Government's impact assessments estimate that the total cost of the rollout programme will be £11.3 billion; and
- The Government's impact assessment indicates that there is a strong business case for taking the programme forward. This predicts benefits across the domestic and smaller non-domestic sectors of £18.8 billion over the next twenty years, implying a net benefit of £7.5 billion. These benefits derive in large part from reductions in energy consumption and cost savings in industry processes.

Engage Consulting provides consulting and IS services to the energy & utilities sector and has been a leader in smart metering development in Great Britain and Europe.

Engage provides independent expert advice to energy retailers, network companies, environmental bodies, metering companies and many others through the supply chain for smart metering.

Our services have included involvement with national smart meter programmes, benchmarking on customer behaviour, specialist reporting and business requirements reviews.

DCC Scope and Services

The Government has concluded that when DCC commences providing services, the initial scope should cover secure communications, access control, translation, scheduled data retrieval and initial smart grid functions. Meter point / supplier registration should transfer to DCC within 2-3 years of DCC commencing.

The DCC's network should be employed to securely pass details of consumer top-ups to the smart meter.

The responsibility for procuring and owning the WAN module lies with DCC, while the installation, maintenance and end-to-end testing of each WAN and HAN module is the responsibility of the supplier.

DCC regulatory and commercial model

The DCC should be licensed to manage the procurement and contract management of smart metering data and communications services, and be independent from those service providers. An appropriate performance and incentive mechanism should be developed by the programme. The DCC's charging methodology and statements will be published. Service charges should be cost reflective, while elective services will be on the basis of 'user pays'.

The Smart Energy Code will detail the relationships between DCC and users of its services.

Establishment of DCC's services and transitional arrangements

The Government will follow a parallel procurement approach where it will initiate procurement of service provider contracts in parallel with the DCC licence applications process.

A licence condition of DCC will be to adopt existing communications contracts associated with compliant metering systems installed prior to DCC go live, subject to the contracts meeting agreed pre-defined criteria.

Data Access & Privacy

Programme approach

Work is underway in the programme to investigate whether aggregating or anonymising smart metering data using privacy enhancing technologies will still enable the stated benefits to be realised. This is looking to avoid the smart metering data becoming personal data.

The Government would like to see an industry-owned Privacy Charter developed, which suppliers' offer to lead is welcomed.

Policy Framework for Privacy

Consumers should choose in which way consumption data is used and by whom, with the exception of data required to fulfil 'regulated duties'. The European Regulators Group for Electricity and Gas (ERGEG) has confirmed this as best practice. However, there is no decision yet on how to give effect to overarching principle of customer choice in use of data, as more impact analysis is required for different approaches for use and achieving consent.

The Government is minded that the data required to fulfil regulated duties should be narrowly defined, only covering the essential data needed to meet licence requirements. Not all regulated duties will require access to half-hourly, or other forms, of data.

The programme accepts that further work is needed to determine the level of smart metering data needed for billing and settlement, especially as settlement rules are likely to evolve to make best use of smart data.

For Network Operators the programme view is that their licence obligations are likely to be discharged using aggregated or anonymised smart consumption data unless Network Operators provide evidence to the contrary.

Access to Smart Metering data by consumers

The Government has indicated that the minimum functional requirement of the smart metering equipment within the consumer premises is to hold thirteen months of data storage to enable customers to compare the same month's consumption in different years, and to make it easier to compare tariffs.

The primary method of consumer access is expected to be local access via the IHD, or via a data capture device (such as a PC, web portal or Smartphone). For remote access domestic consumers will be able to allow third parties to obtain information directly from the DCC. Prior to the DCC being introduced access will be through the supplier.

Design Requirement – Functional Catalogue

Suppliers should roll out smart metering equipment that meets a set of technical specifications. The technical specifications should be based on the minimum requirements set out in the Functional Requirements Catalogue.

The programme will facilitate the process of converting the functional requirements into technical specifications - such that compliant meters are available in volume during 2012.

A full list of the functional requirements that must be supported by the smart metering system is included in the Functional Requirements Catalogue. The main features are:

- All electricity meters and domestic gas meters to support remote enablement and disablement of supply.
- The HAN should use open standards and protocols.
- IHDs should be connected to gas and electricity meters through the HAN.
- The WAN module should be capable of being separated from the meter to enable the module to be upgraded without exchanging the meter.

The Catalogue has been refined to provide further clarity in a number of areas. However, two elements of the Catalogue were subject to strong views. In this context, the following conclusions are drawn out:

- *Loss of supply alerts.* The Government requires this functionality. Work will continue in the next phase to examine the most cost-effective way to deliver this functionality.
- *Data stored at the meter.* The Government requires 13 months of half-hourly consumption data to be stored on the meter.

At a minimum, every IHD will be required to provide information on:

- Current and historical electricity and gas consumption
- Usage in pounds and pence as well as kilowatts and kilowatt hours
- Ambient feedback that allows consumers to easily distinguish between high and low levels of current consumption
- Account balances in real-time for prepayment customers and on at least a monthly basis for credit customers.

When IHDs are provided in the domestic sector, suppliers will be required to provide advice on their use.

Security

The programme will continue to adopt an approach to security based on risk identification, assessment and treatment. In line with received best practice, identified risks are managed in a proportionate manner to reflect "security by design" principles with a holistic approach to ensure the best possible basis for ensuring that security is embedded into the GB smart metering system.

The next phase of the programme will focus on developing the security requirements in the areas of technical security and security governance across end-to-end smart metering.

Roll-out Strategy

Obligations on suppliers to deliver rollout

Government concluded that Suppliers should install smart metering equipment meeting defined technical specifications as part of the roll-out in the domestic and smaller non-domestic sectors, and that this will involve having a completion target and mandatory reporting of progress by suppliers. Government intends to consult on supplier obligations to effectively complete the rollout in 2019.

There will be a “foundation” stage which includes putting in place arrangements to support the technical and commercial interoperability of smart meters; facilitating the transition of communications contracts to the DCC when it begins providing services; and the testing of equipment, systems, processes and consumer engagement strategies.

Government envisages mass rollout to start in the second quarter of 2014. It intends to bring forward proposed licence changes for consultation later this year so that the targeting framework can be introduced into suppliers' licences in the first half of 2012.

To support interoperability for compliant smart meters in the period before DCC services are available, installing suppliers will be required to provide meter technical details and to novate existing communications contracts, so that incoming suppliers may operate meters directly.

Government has concluded that a market-led approach should be followed during the early stages of the rollout (constraints will not be imposed on suppliers in relation to planning, coordination or customer prioritisation).

Consumer experience of the rollout

Government concluded that suppliers should develop and comply with a new licence-backed code of practice governing smart meter installations in the domestic and smaller non-domestic sectors; the new code should focus on the consumer experience of the installation process and will include restrictions on unwelcome sales activities at the point of installation. Government welcomed the progress made in this area by the ERA and consumer groups.

There is a strong case for some elements of consumer engagement to be carried out centrally, or on a coordinated basis.

Government’s Revised Impact Assessment

Smart meter rollout for the domestic sector (GB)

Overall the case for a rollout of smart meters to domestic consumers remains strongly positive in central scenarios; The domestic rollout has a positive Net Present Value (NPV) of over £5bn. The table below compares costs and benefits of the March 2011 Impact Assessment against the preferred implementation option in the July 2010 Impact Assessment. The values for July 2010 have been adjusted since publication in order to correct an error in the discounting calculation and to improve estimates. This increases the value of the NPV published in the July 2010 Impact Assessment from £4,989m to £5,164m.

	March 2011 (PV 2011)	July 2010 corrected (PV 2010)	July 2010 (PV 2009)
Total Costs	£10,757m	£10,403m	£10,051m
Total Benefits	£15,827m	£15,567m	£15,040m
Net Present Value	£5,071m	£5,164m	£4,989m

Changes have been made to the base assumptions on costs and benefits since the July 2010 Impact Assessment. This now takes into account the increased capital cost from last gasp functionality, adding £1 per meter. Other changes include the modelling of new network and

outage management benefits and new assumptions on the requirements for site safety inspections, which are assumed to be required every 5 years for 90% of customers.

Smart meter rollout for the small and medium non-domestic sector

The Impact Assessment considers two policy options to deliver the preferred Government solution for a smart meters rollout in non-domestic premises. Option 1 mandates the use of the DCC, and Option 2 lets suppliers use the DCC at their discretion.

Total (low, central and high) cost and benefits are detailed in the table below:

	Total Costs £bn	Total Benefits £bn			Net Present Value £bn		
		Low	Central	High	Low	Central	High
Option 1	0.574	2.029	2.840	3.681	1.454	2.266	3.108
Option 2	0.574	2.013	2.822	3.662	1.438	2.248	3.089

The modelling results show that both options are almost equal in terms of net present value. The voluntary DCC option is the preferred approach.

Implementation Plan / Next Steps

Phase 1: Policy Design - The published document represents the conclusion of the policy design phase. DECC will be directly responsible for managing the implementation of the programme. Ofgem will continue to safeguard consumer interests and to regulate the energy market as it develops in the light of smart metering.

Phase 2: Foundation - The key objective of this phase is to create a solid foundation for mass rollout.

Phase 2 - Baseline plan key milestones	
Draft technical specification complete	July 2011
EU notification period for the technical specification complete	Jan 2012
First tranche of regulatory obligations on suppliers comes into force, including: <ul style="list-style-type: none"> Mandated rollout completion date Installation code of practice 	Q2 2012
DCC licence application process commences	Q2 2012
'Smart' change of supplier arrangements become standard	Q4 2012
DCC licence awarded	Q4 2012
DCC service providers appointed	Q4 2012
Start of Mass rollout	Q2 2014

Phase 3: Mass Rollout - The key objective of this phase is to achieve the mass rollout by suppliers of smart meters to the programme timescales in a safe, secure, efficient and effective way, which delivers the programme business case and protects the interests of consumers.

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