



Department
of Energy &
Climate Change

Smart Metering Implementation Programme

Third annual report on the roll-out of
Smart Meters

December 2014

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Ministerial Foreword



The smart meter programme is a vital investment that will help to bring our national energy infrastructure into the digital age.

We have continued to make good progress in 2014. Much of the regulatory framework underpinning the roll-out of smart meters is now in place. The Government has finalised a number of the legal and technical documents that govern the way in which energy suppliers, network operators and other users will be able to communicate with smart meters, paving the way for smart systems to be designed, built and tested.

Over the past year, responsibility for taking forward key elements of the smart metering programme has moved to industry and other delivery partners. This summer saw Smart Energy GB, the new name of the independent organisation tasked to engage the nation with smart meters, unveil details of the public engagement campaign that will support the programme.

I am encouraged to see that energy suppliers are now operating more than 400,000 smart meters in homes and over 490,000 smart and advanced meters in non-domestic premises. This is enabling consumers to take control of their energy use and make savings. I was pleased to be offered a smart meter by my energy supplier in February and to become an early beneficiary of this technology. It has been very illuminating for my family to learn more about our energy use through the In Home Display, a device that will be offered to all domestic consumers. There is much that we can learn from the early adopters of smart metering to maximise the benefits for everyone.

I have also had an opportunity to visit a number of energy suppliers to see their smart metering operations in action. I have been very impressed with the enthusiasm and commitment of their staff in taking forward this exciting new chapter in the energy industry and making this technology a success.

I expect to see further good progress being made in 2015. I look forward to working with all parties in the months ahead.

A handwritten signature in black ink, appearing to read 'Sandy Verma', written in a cursive style.

Baroness Verma of Leicester
Parliamentary Under Secretary of State
Department of Energy and Climate Change

Chapter 1 – Introduction

1.1. This is the Government's third annual progress report on the roll-out of smart meters in Great Britain. It reports on the significant developments in the smart metering programme since December 2013 and the measures we will be taking in the run-up to the main installation stage and beyond. In summary:

- **Chapter 1** (this chapter) recaps on the background to the programme and lists some of the key 2014 achievements.
- **Chapter 2** looks at the work DECC has done developing the technical and regulatory framework, and explains what the energy suppliers and other industry partners have been focusing on this year.
- **Chapter 3** explains the work we are doing on tracking progress and ensuring that consumers can realise the benefits of smart metering.
- **Chapter 4** explains how the programme is working to protect the rights of consumers, in particular vulnerable consumers.

1.2. The report finishes with a look-ahead to 2015 (**Chapter 5**), and the Annexes include a summary of the smart metering system, frequently asked questions and a glossary.

The Smart Metering Implementation Programme

1.3. The Government's vision is for every home and small business in Great Britain to have smart electricity and gas meters. The programme aims to replace 53 million meters with smart electricity and gas meters in domestic properties and smart or advanced meters in smaller non-domestic sites, benefitting approximately 30 million premises.

1.4. The smart metering programme is being delivered in two phases: the foundation stage followed by the main installation stage. During the foundation stage, which began in March 2011, the Government has been working with the energy industry, consumer groups and other interested parties to ensure that all of the necessary groundwork is completed to ensure the main installation stage of the smart meters roll-out goes as smoothly as possible and delivers benefits to consumers and Great Britain as a whole.

1.5. Most customers are expected to receive their smart meters in the main installation stage, although some will receive smart meters during the foundation stage, as energy suppliers start up their programmes. Already,

nearly 900,000 smart and advanced meters are operating in households and small businesses.

The Benefits and Costs of Smart Meters

- 1.6. Smart meters will deliver a range of benefits to consumers, energy companies and networks.
- 1.7. Through the In Home Display offered by energy suppliers as part of the roll-out, consumers will have near-real time information on their energy consumption to help them control energy use, and avoid wasting energy and money. Smart meters will bring an end to estimated billing, help consumers to budget better, make switching between energy suppliers smoother and faster, and help restore trust in the energy market. New products and services will be supported in a vibrant, competitive, more efficient market in energy and energy management.
- 1.8. Energy suppliers will have access to accurate data for billing and to improve their customer service. They will also be able to reduce costs, for example by reducing call centre traffic, removing the need for a site visit to read meters and managing debt better.
- 1.9. Energy networks will have better information upon which to manage and plan activities and smart meters will enable smart grids which support sustainable energy supply, such as distributed and renewable energy generation.
- 1.10. Like any infrastructure programme, this involves new investment. Overall, after taking account of the costs, smart meters will have a positive net impact on consumers' bills. Looking at the combination of all costs and savings from smart metering, energy bills will be reduced by an estimated £26 per year by 2020, with the reduction rising to £43 per year by 2030 for the average dual fuel domestic consumer, in comparison to a situation without smart meters.
- 1.11. This national infrastructure programme is expected to deliver £17.1 billion of benefits at a cost of £10.9 billion¹. That's over £6 billion of net benefits: a very positive business case for Great Britain.
- 1.12. Smart meters are the critical foundation for future smarter living which will deliver additional benefits to those identified in the business case – for

¹ Smart meter roll-out for the domestic and small and medium non-domestic sectors (GB): Impact Assessment, January 2014: <https://www.gov.uk/government/publications/smart-meter-roll-out-for-the-domestic-and-small-and-medium-non-domestic-sectors-gb-impact-assessment>. Figures are for an appraisal period to 2030 and are presented in 2011 prices and 2013 present values.

example, taking us to a future where ‘smart appliances’ (e.g. dishwashers and washing machines) can automatically respond to price signals sent via the smart meter and use energy when it is cheapest. This will reduce peak demand across Great Britain, reducing the amount of spare capacity that needs to be built. Smart meters will also enable other non-energy related services.

Key Progress since the Second Annual Report

1.13. Since December 2013, DECC’s focus has continued to be ensuring that all parties involved are making the necessary preparations to roll out smart meters during the main installation stage, and that the smart metering system is being set up to deliver the expected benefits to consumers.

1.14. In the past twelve months, we have achieved a number of significant milestones. Some crucial developments include:

- The publication of an updated Impact Assessment in January that sets out the costs and benefits of the smart metering programme.
- By June, 402,600 smart meters were operating in homes, and 493,700 smart and advanced meters were operating at non-domestic sites (Chapter 2)².
- The launch of Smart Energy GB in July and the start of the public-facing campaign to communicate the benefits of smart meters (Chapter 3).
- The completion in November of the notification to the European Commission of key technical documents: the second iteration of the Smart Metering Equipment Technical Specification (SMETS2), the Communications Hub Technical Specifications, the Great Britain Companion Specification and the Commercial Product Assurance Security Characteristics (Chapter 2).
- The further development of the Smart Energy Code, the legal framework setting out the rights and obligations for the different industry parties that use smart metering equipment and the information it provides. During 2014 we introduced a number of important parts to the Code, including those areas required for testing (Chapter 2).
- The delivery and analysis of the Early Learning Project: a programme of research into consumer experience of smart meters (Chapter 3).

Programme Plan

1.15. In addition to the work outlined above, DECC has continued to work closely with industry partners to monitor delivery against the agreed joint programme

² These figures are published quarterly: the July to September figures will be published on 18 December and the October to December figures in March 2015.

plan. In November 2014, the Data and Communications Company (DCC), which is responsible for building the national communications infrastructure to support smart metering, launched a consultation on some revisions to its delivery plan timescales. DECC (and other industry delivery partners) are now considering the implications for the overall programme plan. The revised DCC plan will be finalised in early 2015. The issues are described in more detail in Chapter 2.

Learning from International Programmes

1.16. We fully recognise the value of learning from smart meter programmes taking place in other countries. Over the last year, we have met officials from the programmes of the Republic of Ireland, China and Japan and we have continued to keep in touch with officials from smart meter projects in other countries. This helps us to understand how other countries' existing programmes are developing, and identify where there are new initiatives to research further.

Conclusion

1.17. This aim of this chapter has been to provide some context for the smart metering programme. The next will look at technical delivery in more detail.

Chapter 2 – Ensuring Delivery

- 2.1. Preparing for the roll-out of smart meters is a joint effort. During 2014, industry partners including the DCC and its contractors, energy suppliers, network operators and manufacturers have continued to develop the systems that will deliver smart meters to consumers when the main installation phase begins. The award of the DCC licence and service provider contracts and initial designation of the Smart Energy Code in 2013 marked major milestones for the programme and the start of a transition of responsibility to industry for the delivery of the programme and its benefits.
- 2.2. During this transition, DECC retains an important role in driving delivery as the steward of the benefits case on behalf of consumers, including providing active oversight of progress by all delivery parties. The key 2014 activities for DECC have been:
 - Continuing to lead the development of the technical documents and regulatory structures that will govern the smart meter system.
 - Scrutinising and challenging energy supplier and other industry party plans, and operating the governance processes that bring delivery partners together to drive progress.
 - Monitoring energy suppliers' progress in installing smart and advanced meters in homes and smaller non-domestic premises, and working with suppliers to understand their plans for the remainder of the roll-out.
- 2.3. This chapter explains these activities in more detail.

Developing the Regulatory Framework

- 2.4. The main components of the regulatory framework for the operation of smart metering are:
 - The licence for the DCC (awarded in September 2013).
 - The licence obligations on electricity and gas suppliers and networks.
 - A new industry code created under the DCC licence called the Smart Energy Code, a multiparty agreement that sets out the day-to-day rules, rights and

obligations for the DCC and its users. It includes a variety of detailed subsidiary documents.

- A number of technical specifications.

Smart Energy Code: Development during 2014

- 2.1. We are building up the content of the Smart Energy Code in stages, designed to provide the necessary framework as it becomes needed by the DCC and industry. We brought the Code into existence in September 2013 and first focused on the initial structure and governance of the Code and charging methodology.
- 2.2. During 2014 we have introduced three substantial further tranches of content following consultation and Parliamentary approval, defining the obligations on the DCC and its users with respect to a wide range of matters. Examples include the establishment of a security sub-committee to oversee the security of the whole system, the detailed requirements that energy suppliers and the DCC must fulfil with respect to security, and the system for suppliers to provide the DCC with forecasts of the number of communication hubs they will require.
- 2.3. There remain a limited number of other areas for which more content will be required, notably in relation to non-domestic premises. New requirements may emerge from the experience gained in developing and testing the DCC and users' systems. We expect to continue work on these and possibly also on associated licence conditions during 2015.
- 2.4. A further substantial part of the Smart Energy Code are the subsidiary documents containing technical detail of processes and procedures to be followed for the delivery of the DCC's services. In most cases these are being developed and consulted on by the DCC and will be incorporated into the Code.

Other Technical Documentation: Progress in 2014

- 2.5. A range of additional technical documents are also needed to set the platform for smart metering equipment to be built, tested and deployed for large scale roll-out. In 2014 DECC has worked with industry and other interested parties on a number of these:

- In February, the Government consulted on the process to finalise the GB Companion Specification which sets out (amongst other things) the detailed arrangements for communications between smart meters, other devices on the Home Area Network and the DCC. Based on the outcome of this, a joint industry project team was established to oversee the further development of the document, and version 0.8 of the GB Companion Specification was issued in July for consultation.
- The consultation response to version 0.8 was issued in November alongside the GB Companion Specification (version 0.8.1, which included minor amendments arising from the consultation) and consequential updates to the SMETS and the Communications Hub Technical Specifications³. These specifications will now be used as the basis for DCC testing.
- Alongside the GB Companion Specification, the second version of the SMETS, Communications Hub Technical Specifications and the Commercial Products Assurance Security Characteristics were notified to the European Commission under the Technical Standards and Regulations Directive in July⁴. We received no comments or detailed opinions from the Commission or other Member States on these.
- Following a consultation, the Government has issued the consultation response in November confirming that energy suppliers will be required to provide a SMETS compliant Home Area Network⁵ in each consumer's premises. Good progress has been made towards ensuring that there are technical, regulatory and commercial solutions for the provision of a SMETS compliant Home Area Network in all GB properties. Energy suppliers and wider industry have continued work on the standard required to deliver the 868MHz Home Area Network solution that will increase Home Area Network coverage from 70 per cent⁶ to over 95 per cent of GB homes.
- Five per cent of properties in Great Britain (mostly blocks of flats and converted houses) may require additional equipment to extend the Home Area Network from the metering equipment into the consumer's premises (for example where an In Home Display is in a flat on the 20th floor of a block and the electricity meter is on the ground floor). Technology is available that could be used to provide a Home Area Network in such instances. DECC is

³ The SMETS and Communication Hub Technical Specifications set out the minimum technical requirements of the devices that suppliers are required by their licences to install in consumers' premises.

⁴ The notification process gives other Member States a chance to comment on draft technical standards, to ensure that these do not cause undue barriers to trade.

⁵ The provision of a Home Area Network will allow consumers to access consumption and tariff information from smart meters. This will provide an unprecedented platform for innovation in a range of markets from smart grids to assisted living services.

⁶ The current solution at 2.4GHz will provide coverage for at least 70 per cent of GB properties.

continuing to work with a range of stakeholders (including energy suppliers and technology providers) to gather further evidence on implementation options to help ensure that technology solutions are provided in an efficient manner.

Working with Industry

- 2.6. The successful completion of the roll-out relies on a wide range of parties working together to bring technologies and services to customers, so that they can take control of their energy use. The programme is designed in such a way as to ensure clear obligations on energy suppliers, network companies, the DCC and other parties who use the smart metering system.
- 2.7. This year the DECC team have continued to maintain and monitor the joint industry plan for the programme. This helps to ensure a focus on delivery by all industry parties and that the dependencies between them are managed.

DCC Activities

- 2.8. The DCC is currently midway through the design and build stage for the core system, and is incorporating the communications protocols that were issued by DECC in July as part of the GB Companion Specification. Once the build phase is complete, the DCC will integrate the data and communication systems. This requires a period for testing and resolution of any issues to ensure that the overall DCC system is robust. In parallel, the DCC's users (primarily energy suppliers and network operators) are developing their back-office systems to be ready to interact with the DCC, for example working on legacy billing systems and customer platforms. Once complete, users will test their systems with the DCC to ensure they can establish a robust end-to-end system from their back office through to the meters in customers' homes. It is vital that adequate time is allowed for comprehensive testing to be undertaken, to ensure that there is a stable and scalable system. In turn, this will enable a successful roll-out of smart meters.
- 2.9. Having reviewed their service providers' workplans and the updated elements of the Smart Energy Code and the GB Companion Specification, in November 2014 the DCC launched a consultation on some revisions to its delivery plan. This indicated that the DCC will need at least until the end of March 2016 to be ready to offer live services. The current date for live operations commencing is December 2015. The DCC is also consulting industry on the need for additional time contingency in the event that currently unforeseen

issues emerge, for example during the testing phase. The DCC consultation outlines two options: one where a three month contingency is added and services go live in July 2016 (if all contingency needs to be used) and the alternative where a six month contingency is added with services going live in October 2016 (if all contingency needs to be used). The DCC will review responses and propose a final set of plan milestones to the Secretary of State in early 2015.

Energy Suppliers' Activities

2.10. Energy suppliers are responsible for planning and delivering the installation of smart meters for their customers. Suppliers are currently focused on ensuring that they have the right people, processes and technology in place to start the main roll-out.

2.11. An important part of this is ensuring the availability of SMETS2 meters at volume in order to allow for a timely commencement of the main installation stage of the programme. DECC is actively working with energy suppliers to ensure adequate progress is being made with financing and procuring their smart meters, and that they ensure that meter manufacturers have robust plans to develop and manufacture smart meters to support demand. Regular engagement by the Department with supply chain actors is seeking to identify key issues, blockers and the actions required to resolve them.

2.12. Other energy supplier activities in 2014 include:

- Upgrading and enhancing their internal systems and business processes (for example billing and appointment scheduling).
- Commencing the build or procurement of technical solutions to allow supplier systems to have two-way communication with the DCC.
- Roll-out planning (e.g. volumes of meters installed per year, per area) and the recruitment of the workforce to support this activity.
- Continuing to install smart and advanced meters in homes and businesses, to gain valuable insights on efficient roll-out strategies, customer experience and installation processes.

Network Operators' Activities

- 2.13. The gas and electricity network operators are preparing for the roll-out of smart metering by ensuring they have adequate resources available to support roll-out interventions when required (for example, where a damaged meter board could prevent the supplier from being able to successfully install the smart meter).
- 2.14. Additionally, the electricity network operators are required to be able to interface with the DCC, and are working with systems providers to procure and implement the required technology.

Progress in Installing Smart Meters

- 2.15. For a number of energy suppliers and their customers, smart metering already exists and is delivering benefits.

Reporting Progress

- 2.16. Larger energy suppliers provide Government with quarterly and annual reports on progress. DECC has aggregated⁷ installation data in this report to give an overall picture of larger energy suppliers' progress. The installation data from the quarterly returns is also published on a quarterly basis⁸.
- 2.17. The Government has some information from smaller energy suppliers on progress, and will be formally requesting more detailed information from smaller suppliers for the 2014 calendar year. DECC will publish more detail on small energy supplier progress in 2015, once the data collected at the end of 2014 has been quality assured. Early data provided by some of the smaller suppliers demonstrates that they are embracing the foundation stage, and a number are using the benefits of smart metering as a specific marketing opportunity for consumers.

⁷ Data and information provided to Government by energy suppliers is anonymised and aggregated as necessary to ensure that commercially sensitive information is appropriately protected.

⁸ The statistics are available at <https://www.gov.uk/government/collections/smart-meters-statistics>. The figures are published as Experimental National Statistics, which means they are official statistics which are undergoing an evaluation process before being assessed as National Statistics. They are published in order to involve users and stakeholders in their development, and as a means to build in quality assurance during development.

Progress to Date

Domestic

- 2.18. By the end of June 2014⁹, the large energy suppliers were operating 402,637 smart gas and electricity meters in Great Britain, representing 0.9 per cent of all the domestic meters operated by the large suppliers.
- 2.19. The large energy suppliers were also operating 801,297 smart-type gas and electricity meters in domestic properties. Smart-type meters offer some, but not all, of the functionality of SMETS-compliant meters. Although they will have to be replaced by the end of 2020, they allow energy suppliers to learn lessons ahead of their larger-scale installation of smart meters and give customers early access to some of the benefits of smart metering. The number of smart-type meters in operation is plateauing, and we expect the number to decline as more SMETS-compliant smart meters are installed (Figure 1).

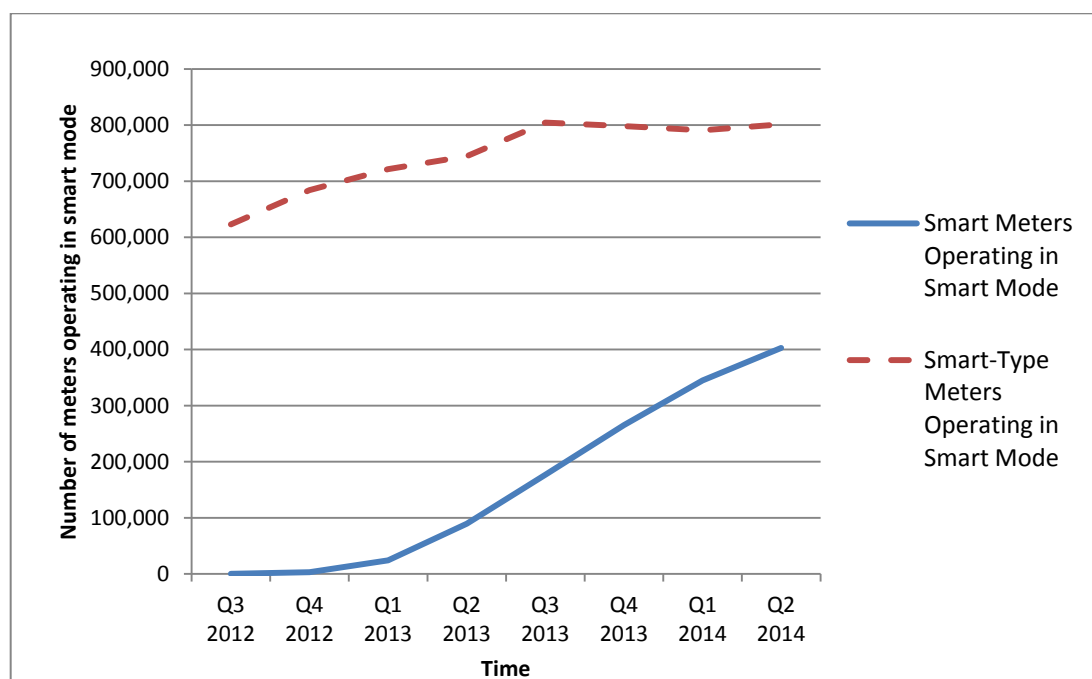


Figure 1: Number of domestic gas and electricity meters operated by the larger energy suppliers, by meter type and quarter. (Source: DECC)

Non-domestic

- 2.20. Energy suppliers are also rolling out SMETS-compliant smart meters to smaller non-domestic customers. Advanced meters¹⁰ can also be installed as

⁹ Statistical release and data: Smart Meters, Great Britain, Quarter 2 2014, September 2014: <https://www.gov.uk/government/statistics/statistical-release-and-data-smart-meters-great-britain-quarter-2-2014>. The Quarter 3 2014 data will be published on 18 December at <https://www.gov.uk/government/collections/smart-meters-statistics> and the Quarter 4 2014 data in March 2015.

an alternative in non-domestic sites until April 2016. They may also be installed between April 2016 and December 2020 where a contract to install such meters is in place before April 2016. These meters count towards the smart meter roll-out obligations.

- 2.21. This difference of approach between the domestic and non-domestic sectors reflects the longstanding use of advanced metering at non-domestic sites and the interest of many non-domestic customers, especially multi-site organisations, in having common metering across a range of sites. Significant numbers of advanced meters have already been installed in the non-domestic sector, where meters are often installed by third party service providers as well as energy suppliers.
- 2.22. At the end of June 2014, a total of 493,687 smart and advanced meters (6,214 smart and 487,473 advanced) were in operation, and represented 18 per cent of all smaller non-domestic site meters operated by the larger energy suppliers¹¹.

Smart Meter Roll-Out Profiles to the End of 2020

- 2.23. The larger energy suppliers provide information to Government about their plans for rolling out smart meters, looking ahead to 2020¹². The graph below (Figure 2) provides a useful snap-shot, on a national basis, of larger suppliers' projections, as at the end of September 2014.

¹⁰ As a minimum, an advanced meter must be able to store half-hourly electricity and hourly gas data, to which the customer can have timely access, and the supplier have remote access.

¹¹ Smart Meters Statistics: <https://www.gov.uk/government/collections/smart-meters-statistics>.

¹² Roll-out profiles provided by the larger suppliers assume their customer base remains unchanged throughout the roll-out.

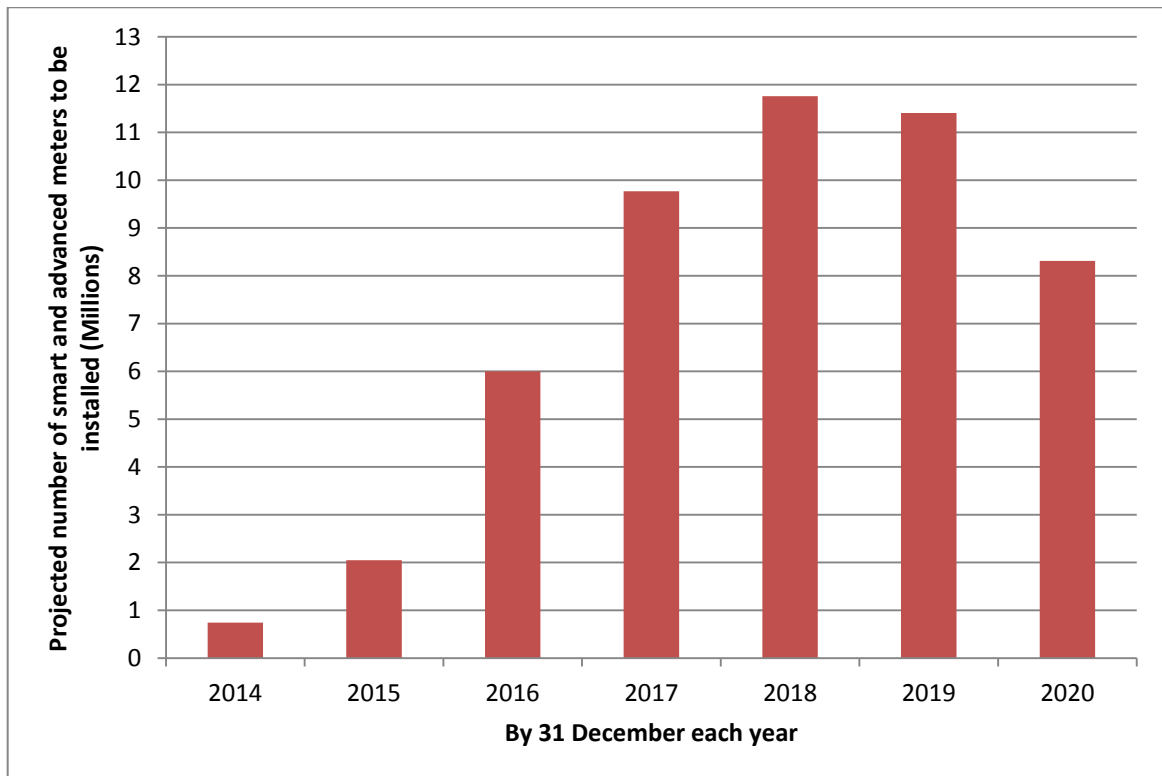


Figure 2: Current projections by the larger energy suppliers of the number of smart and advanced meters to be installed per year in domestic and non-domestic properties between 2014 and 2020, as at end September 2014. (Source: DECC)

Future Reporting on Roll-Out Plans

2.24. DECC gathers a range of qualitative and quantitative data from energy suppliers to understand their readiness for the roll-out of smart meters and their progress in installations. In 2014, DECC began work with Ofgem and other industry partners to review these requests, to ensure that they deliver the data that Government needs to monitor the progress of the programme without imposing undue burden and cost on energy suppliers.

2.25. Ofgem has recently announced its plans for supplier reporting during the roll-out¹³. In 2015 Ofgem will require large energy suppliers to develop roll-out plans and (from January 2016) commit to annual milestones (the percentage of their customers that will receive smart meters each year) which they will be required to meet as a condition of their supply licences.

¹³ Decision on supplier reporting to Ofgem during the smart meter rollout, October 2014: <https://www.ofgem.gov.uk/publications-and-updates/decision-supplier-reporting-ofgem-during-smart-meter-rollout>

Conclusion

2.26. This chapter has provided a summary of the programme's work to get the technical and legal system in place. The next chapter will look at some of the work DECC does to ensure that this system is set up for consumers to achieve the benefits of smart metering.

Chapter 3 – Engaging Consumers and Realising the Benefits

- 3.1. As the main installation stage approaches, DECC’s task is to ensure that the system is set up so that consumers can realise these benefits, and that Government has a robust system for tracking progress. DECC’s formal information gathering is starting to focus more on the consumer experience and tracking the benefits of the roll-out. This will ensure that DECC understands how the roll-out is progressing, and means that action can be taken if the benefits are not being realised¹⁴.
- 3.2. This chapter provides a recap on some of the key benefits and explains some of the work that DECC and Smart Energy GB are doing to understand consumers’ perceptions of smart meters before the main installation stage begins. It also explains how Smart Energy GB is developing plans for its large-scale consumer engagement campaigns.

The Benefits of Smart Meters

- 3.3. The latest Impact Assessment for the programme, published in January 2014, estimates a positive net present benefit of £6.2 billion from smart meters (on the basis of £10.9 billion present value costs and £17.1 billion present value benefits)¹⁵. The two largest elements of these benefits are direct energy savings and industry cost savings, which will help energy suppliers to reduce their costs to serve customers.
- 3.4. The key benefits relate to:
 - Giving domestic consumers the information to gain control over their energy consumption. Near real time feedback through the In Home Display and energy efficiency guidance provided by energy suppliers and Smart Energy

¹⁴ Plans are set out in full in the Monitoring and Evaluation Strategy, December 2012: <https://www.gov.uk/government/consultations/information-requirements-for-monitoring-and-evaluation-of-smart-meters>. This sets out how DECC will collect information on the roll-out, costs and benefits, and the impacts on consumers. This information will be used to report on progress and to identify any action needed.

¹⁵ Smart meter roll-out for the domestic and small and medium non-domestic sectors (GB): Impact Assessment, January 2014: <https://www.gov.uk/government/publications/smart-meter-roll-out-for-the-domestic-and-small-and-medium-non-domestic-sectors-gb-impact-assessment>.

GB will give consumers the information and tools they need to reduce their energy demand.

- Lower costs for managing the supply of energy across industry – for example, the end to estimated bills will lower contact handling costs and reduce the millions of contacts made by consumers each year to dispute bills. Suppliers will no longer have to physically visit a household to obtain a meter reading. Prepayment as a means of payment will have a lower cost base, with no need to visit homes to install prepayment meters.
- Consumer convenience benefits – we expect to see a transformed prepayment experience for smart consumers, with a variety of top up options and the option of remote switching between credit and prepayment tariffs. Smart meters will also enable a smoother switching process, and access to the data (with consumers' permission) will help suppliers and switching sites identify the best tariff for individual consumers (see below).
- Network companies will be able to identify and resolve outages more quickly and efficiently and make more cost effective investment decisions on energy infrastructure.
- Smart meters will facilitate time of use tariffs which are expected to deliver savings by shifting energy demand away from peak periods.
- Detailed consumption data from smart meters will enable the development of a wide range of applications, including home energy management products and assistive living services.
- Smart metering technology will also pave the way for future innovations, laying the foundations for smarter grids.

Ofgem's Work on the Switching Process

- 3.5. The smart meter infrastructure provides the fundamental building blocks for faster, more reliable switching. Ofgem is leading a Change of Supplier project as part of their Smarter Markets programme. This culminated in an Ofgem consultation earlier this year on several headline long term changes. These included the proposal to introduce, before the smart meter roll-out completes, a new platform that centralises registration services across both the gas and electricity markets. It was proposed that this service should be managed by the DCC and that it should provide the capability for next day switching. Ofgem are due to publish a consultation response around the turn of the year.

Understanding Domestic Consumers' Perceptions and Behaviours

- 3.6. The foundation stage of the programme is enabling consumers to learn about smart meters, and to access early benefits. Those energy suppliers that have

undertaken significant numbers of installations are reporting higher levels of satisfaction amongst their customers with smart meters.

3.7. During 2014 work has continued on the DECC 'Smart Metering Early Learning Project'. This programme of research is a key element of DECC's foundation stage activity to evaluate early smart meter installations.

3.8. This consists of a number of different strands:

- A face-to-face in-home survey, conducted by Ipsos MORI, of the behaviour, attitudes and experience of 4,000 residential consumers with and without smart meters.
- In-depth qualitative research conducted by Ipsos MORI with some consumer survey respondents to help explain the survey data and any emerging issues in greater depth.
- DECC's own analysis of energy consumption data from around 6,000 installations of smart electricity and gas meters to measure actual changes in consumption following installation.
- In-depth qualitative research undertaken by Creative Research on smart prepayment looking into the experiences of consumers who already use smart prepayment and attitudes of consumers on traditional prepayment and credit meters towards the concept of smart prepayment.

3.9. A synthesis project led by the University of Oxford interprets the findings from the Early Learning Project alongside a wide range of other evidence from Great Britain and abroad to help understand how the objectives of the Consumer Engagement Strategy¹⁶, particularly around energy saving, can best be achieved. It will therefore report not only on what has happened to date, but also what else might need to be done to ensure consumer benefits are maximised. The findings from the Early Learning Project will be published in early 2015.

Understanding Non-Domestic Customers' Perceptions and Behaviours

3.10. In 2014 DECC funded the Carbon Trust to consider how smart and advanced metering might encourage innovation and enable the development of new products and services in energy supply and management solutions. The Carbon Trust has developed a 'forward look' for the period up to c.2020,

¹⁶ Smart Meter Consumer Engagement Strategy, December 2012:
<https://www.gov.uk/government/consultations/smart-meter-consumer-engagement-strategy>

identifying five key innovations that will be enabled by the smart meter roll-out for non-domestic customers.

3.11. Additionally a programme of further research into how benefits will be realised for non-domestic consumers has been initiated and will produce outputs in 2015. From this work DECC will gain a comprehensive understanding of how smart metering supports the delivery of energy saving benefits for the non-domestic consumer.

Smart Energy GB: Gearing Up for Large-Scale Consumer Engagement

3.12. Smart Energy GB¹⁷ is building on research to develop its work and plans, and this year considerable progress has been made, with the public-facing brand and creative campaign launched in July 2014.

Objectives

3.13. Smart Energy GB's objectives are to:

- Build consumer confidence in the installation of smart meters.
- Build consumer awareness and understanding of how to use smart meters and the information obtained from them.
- Increase consumer willingness to use smart meters to change their behaviours so as to enable them to reduce their energy consumption.
- Help vulnerable, low-income and prepayment customers to realise the benefits of smart metering systems while continuing to maintain an adequate level of warmth and meet their other energy needs.

3.14. During the first half of 2014, Smart Energy GB focused on developing its overarching strategy, running the competitive tender for the creative campaign and building the public-facing website, with the official launch taking place in July 2014. Smart Energy GB used consumer focus groups to help with the campaign design, and ensured the campaign could work across a wide range of communication channels and be easily adopted by energy suppliers and third parties. So far the campaign has been used for targeted advertising

¹⁷ The DECC Consumer Engagement Strategy set the expectations and the associated licence conditions established the obligations for suppliers to set up and fund a consumer engagement Central Delivery Body by June 2013. This organisation is now formally known as Smart Energy GB.

(including local radio and billboards) with increasing media planned to align with the main installation stage.

3.15. In terms of preparing for campaign delivery in years to come, Smart Energy GB has:

- Developed communication plans across a range of media.
- Used a wide range of data to map the campaign against supplier roll-out profiles and a segmentation of the population.
- Gathered significant stakeholder input for its partnership strategy.
- In May 2014, launched its biannual public attitude and awareness tracker project, which will provide some key benchmarks for evaluating its performance.

3.16. For more information on Smart Energy GB's plans and activities, see the Consumer Engagement Plan for 2015, due to be published in December 2014¹⁸.

Developing Awareness

3.17. DECC has previously monitored the awareness of and attitudes to smart metering of energy bill payers in Great Britain through a consumer tracker quantitative survey. Four waves of this survey were carried out and published¹⁹.

3.18. Smart Energy GB has responsibility for tracking trends in consumer awareness of the smart meter roll-out and released some findings from the first wave in June 2014²⁰. Because of changes in methodology and questions to meet the new requirements of Smart Energy GB, the outputs from this new survey are not directly comparable to previous DECC published outputs.

3.19. Smart Energy GB's work on awareness so far has found:

- 44 per cent of respondents are interested in having a smart meter installed.
- 37 per cent of respondents agree with the statement 'I worry that my energy bills are not accurate'.

¹⁸ This will be published at www.smartenergygb.org.

¹⁹ Quantitative research into public awareness, attitudes and experience of smart meters, Wave 4, February 2014: <https://www.gov.uk/government/publications/quantitative-research-into-public-awareness-attitudes-and-experience-of-smart-meters-wave-4>.

²⁰ Consumer attitudes to the energy market and smart meters, Wave 1, May 2014: <http://www.smartenergygb.org/media-and-resources/press-releases/research-paints-picture-consumer-mistrust-confusion-and-anxiety>

- 43 per cent of respondents do not believe they have the information they need to choose the right energy tariff.
- Trust in energy suppliers significantly increases amongst customers who have a smart meter.

Conclusion

3.20. This chapter has explained how all those involved in consumer engagement, including DECC, the energy suppliers, Ofgem and Smart Energy GB are working together to engage households and businesses to make the roll-out a success. This work will continue in 2015.

3.21. The next chapter looks at some of the detailed work that underpins the consumer engagement plans, by making sure that consumers can have confidence in the safety and security of the smart metering system.

Chapter 4 – Protecting Consumers

- 4.1. Developing a framework of rules to protect consumers was an essential first step in establishing the smart metering system. Now that the framework is largely in place, DECC is working with energy suppliers, Ofgem and consumer groups on some of the detailed processes, and to ensure that the system gives consumers a positive experience of smart metering in practice.
- 4.2. This year DECC has made significant progress in a number of areas:
- We have put in place robust arrangements to audit compliance with data privacy requirements.
 - We have made provisions for further extending consumer access to consumption data and provided new rights for consumers with microgeneration to access export data.
 - We have completed the security architecture, including by putting in place requirements for DCC users to undergo regular independent security assurance processes.
- 4.3. Industry and other partners have also been engaged in work on consumer protections this year:
- Industry's Smart Metering Installation Code of Practice (SMICoP) Governance Board have made good progress in implementing and further developing the Code to ensure that consumers receive a good standard of service and are treated fairly throughout each installation process.
 - Energy suppliers and others have been working to develop tailored support for vulnerable consumers.
 - Ofgem have launched their work to ensure that the broader regulatory requirements support the delivery of smart meter benefits to consumers and protect their interests.
- 4.4. These activities are described in more detail below.

Data Access and Privacy

- 4.5. A successful roll-out will depend on consumers being reassured that they will retain control over who accesses their data and how it is used. Regulations²¹ govern the ways in which different parties can access energy consumption data, the purposes for which they can use it and the choices that consumers will have about this. The core principle is that, other than when data is required for billing and regulated duties, consumers will have control over their energy consumption data. Energy suppliers are only permitted to access daily data if the customer has not opted out, and to access half-hourly data they must have the customer's explicit consent.
- 4.6. Network operators will be able to access energy consumption data, including half-hourly energy consumption data for regulated purposes without consent, if they have had plans for aggregation approved by Ofgem to address potential privacy concerns.
- 4.7. Smart metering equipment will ensure that domestic consumers are able to access their own energy consumption data easily and share this with third parties (such as switching sites) should they choose to do so. There are separate data access rules in the non-domestic sector that reflect the different make-up of the market.
- 4.8. Provision for smart meter data access and privacy has been further developed during the year:
- In order to transpose the requirements of the EU Energy Efficiency Directive, new licence conditions were put in place in June 2014 to require energy suppliers to meet requests from smart metering domestic consumers to provide them with at least 24 months of daily, weekly, monthly and annual consumption data (or the length of the supply contract if that is shorter) over the internet or meter interface.
 - Additional licence conditions that came into force at the same time will require suppliers to provide, on request, export data to consumers with micro generation installed, where their smart meter is being used to record electricity exported to the national grid.
 - In November, DECC laid in Parliament amendments to the Smart Energy Code. The Code will make provisions to audit User requirements to obtain consumer consent before requesting the DCC to provide access to a customer's smart meter consumption data.

²¹ Smart Metering Implementation Programme: Data access and privacy – Government response to consultation, December 2012: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43046/7225-gov-resp-sm-data-access-privacy.pdf.

Security

- 4.9. Government has now set in legislation (under the Smart Energy Code) obligations on energy suppliers, network operators and other users of the DCC, as well as the DCC itself, to take the right steps to secure their smart metering systems.
- 4.10. The security requirements for smart metering equipment, and the associated requirements governing secure communications between devices and the DCC, were approved by the European Commission in November (see Chapter 2). Smart metering communications will be cryptographically secured, with this control being facilitated through the use of a Smart Metering Key Infrastructure based on existing industry and international Public Key Infrastructure standards, mechanisms and principles²². We have consulted on and implemented relevant obligations during the year, providing for the operation, governance and assurance of the Smart Metering Key Infrastructure.
- 4.11. To provide confidence in the overall security of smart metering, a detailed set of independent security assurance arrangements for the DCC, its users, and smart metering equipment has been established under the Smart Energy Code.

The Smart Metering Installation Code of Practice

- 4.12. The Government has required energy suppliers to develop and comply with a code of practice²³ which governs the consumer experience throughout the smart meter installation process, at both domestic and micro-business premises, to give consumers confidence. This will ensure that consumers receive a good standard of service and are treated fairly and transparently. Some of the SMICoP Governance Board's key 2014 activities are explained below in Figure 3.

²² Public Key Infrastructure is used widely across business sectors where secure transactions are needed, including for example, internet trading, banking transactions and billing systems.

²³ The SMICoP was approved by Ofgem and came into operation in June 2013.

In 2014 the SMICoP Governance Board made good progress on the development and promotion of the SMICoP. The continuing involvement and support of energy suppliers, Citizens Advice, Ofgem and DECC was crucial to this.

Broadening Engagement: The Board recognise the importance of greater involvement by the small domestic suppliers and micro-business suppliers and have taken proactive steps to engage directly with them, both bilaterally and through other industry representative groups. Operational relationships have also been established with Smart Energy GB.

Code Administration: The Board carried out a competitive procurement and appointed ElectraLink Ltd as Code Administrator. This will ensure the SMICoP is administered in a wholly independent manner ensuring fairness, transparency and openness. A website is under development and its key characteristics will be openness, transparency and simplicity of use. This will ensure consumers can access all SMICoP non confidential information.

Vulnerable Customers: on-going work to refine the Code definition of a Vulnerable Customer to align with Ofgem's Vulnerable Customer Strategy. This will ensure that any customer considered vulnerable is identified as such and the special arrangements within the Code for additional support can be provided. The group will also monitor how suppliers, and other parties, plan to assist vulnerable consumers during the roll-out.

Customer Survey: This is another key component of the SMICoP assurance regime and will apply to all energy suppliers rolling out smart meters once they have installed a minimum number of meters. The customer survey is intended to establish whether the obligations and standards set out in the SMICoP are being followed by suppliers. A number of surveys have been conducted by suppliers who have foundation stage roll-out programmes and the results from these have been valuable learning tools. The Board has established a working group and conducted a broad consultation on the content, style and method of delivery of future surveys and the results of this will be used to refine and further develop the Customer Survey.

Figure 3: SMICoP Governance Board 2014 Update (Source: ElectraLink)

Vulnerable Consumers

- 4.13. An essential part of the smart metering regulatory framework requires that vulnerable consumers who are more at risk of missing out on the benefits of smart meters get the support they need to overcome any barriers. The SMICoP requires energy suppliers to identify and meet the needs of

vulnerable consumers, and Smart Energy GB is required to assist vulnerable consumers to realise smart meter benefits.

4.14. In addition, we have taken steps to reduce the number of consumers who would find it difficult to use the In Home Display by requiring energy suppliers to ensure they offer In Home Displays designed in a way that makes the information provided easily accessible and understood by a wide range of consumers. Such consumers include, among others, those with disabilities. Notable action this year has included energy suppliers working closely with Royal National Institute of Blind People to identify a technical solution that would offer blind and partially sighted consumers access to consumption data equivalent to that offered by the standard In Home Display. In September 2014, Citizens Advice published research by National Energy Action on developing an Extra Help Scheme for vulnerable smart meter customers.

Prepay Customers

4.15. Smart metering can transform the prepay experience. DECC has worked closely with stakeholders, including energy suppliers and Energy UK to define the technical requirements for prepayment and ensure these services are available, alongside credit services, for the main installation stage.

Protecting Consumers: Future Work

4.16. Ofgem has an ongoing role in ensuring that the broader regulatory arrangements facilitate the realisation of the consumer benefits and that consumers are empowered and remain protected throughout the roll-out period and beyond.

4.17. In September 2014, Ofgem published the response to its consultation on Consumer Empowerment and Protection in Smarter Markets²⁴. This sets out a programme up to 2020 covering nine key areas of work, including smart prepayment, smart billing and time-of-use tariffs.

- Work on **smart prepayment** will include: assessing the appropriateness of existing prepayment regulations as they relate to smart meters; and considering any steps needed to ensure there are no unintended and detrimental consequences for consumers remaining on traditional prepayment meters.

²⁴ Consumer Empowerment and Protection in Smarter Markets: Updated Work Programme, September 2014: <https://www.ofgem.gov.uk/publications-and-updates/consumer-empowerment-and-protection-smarter-markets-updated-work-programme>.

- For '**smart billing**' Ofgem will look at expectations and requirements for billing in the smart world, and consider various options to ensure that energy suppliers provide consumers with accurate and timely bills and treat them fairly.
- Ofgem's work on **time-of-use tariffs** will consider how these smart tariffs work with its Retail Market Review reforms, which govern the number and structure of tariffs that energy suppliers can offer²⁵. Ofgem will look at how to make sure that consumers have access to relevant and clear information to help them make decisions on which tariff is right for them.

Conclusion

4.18. DECC's regulatory and policy framework to protect consumers during the remainder of the foundation stage and throughout the roll-out is now largely in place. This chapter has explained how we are now working closely with Ofgem and other stakeholders to ensure that the protections are delivered and remain effective. The last chapter in the report will take a look ahead to some key 2015 activities across the Programme.

²⁵ Suppliers are only allowed to have one structure for tariffs, and four tariffs per fuel, with the aim of making tariffs more consistent and easier to compare.

Chapter 5 – Looking Ahead

- 5.1. The next twelve months represent a major period of industry activity in preparation for the start of the main installation stage. The focus for the Government over the remainder of this Parliament and the rest of 2015 will be ensuring that energy suppliers, network operators and the DCC are on course to meet their obligations and commitments.
- 5.2. An early 2015 milestone for both DECC and industry will be agreement on a new delivery plan for DCC systems and on any resulting changes to the joint industry plan. The Government is committed to making smart meters available to everyone as soon as possible, but taking the time to build the right solution is in everyone's interest: industry and consumers alike.
- 5.3. For DECC, 2015 activities will also include:
- Developing the final parts of the Smart Energy Code and licence conditions.
 - Further enhancements to the technical specifications for the metering equipment as the smart system testing continues.
 - Further work with the non-domestic sector, to ensure that these consumers capture the benefits of smart metering.
 - Publishing the findings from the Early Learning Project, the programme of research into consumer experience of smart meters, and taking forward its recommendations.
 - Further development of the Government's monitoring and evaluation framework, including continuing review of DECC's information requests to energy suppliers.
 - Ongoing work with Ofgem and other stakeholders on consumer protection issues and the Data and Privacy Framework.
- 5.4. For industry partners, this will include:
- **The DCC** finalising its delivery plan and milestones, and starting to test its systems.
 - **Energy suppliers** continuing to step up their preparations to deliver installations on the ground: ensuring that they have the staff and systems to deliver a good customer experience.

- **Smart Energy GB** building consumer awareness through its communication campaigns, marketing activities and stakeholder events.

5.5. Government recognises that these activities may pose new challenges. For example, testing may reveal issues that need to be understood and resolved. Energy suppliers may face challenges in dealing with changes in organisation and back office systems. Government is alert to these challenges. The foundation stage has established the governance structures and working relationships to respond to these challenges. With the ongoing cooperation of industry partners, DECC will continue to drive forward the delivery of this important national programme to ensure we realised the benefits for consumers and Great Britain.

Annex A – The Smart Metering System

The Smart Metering System

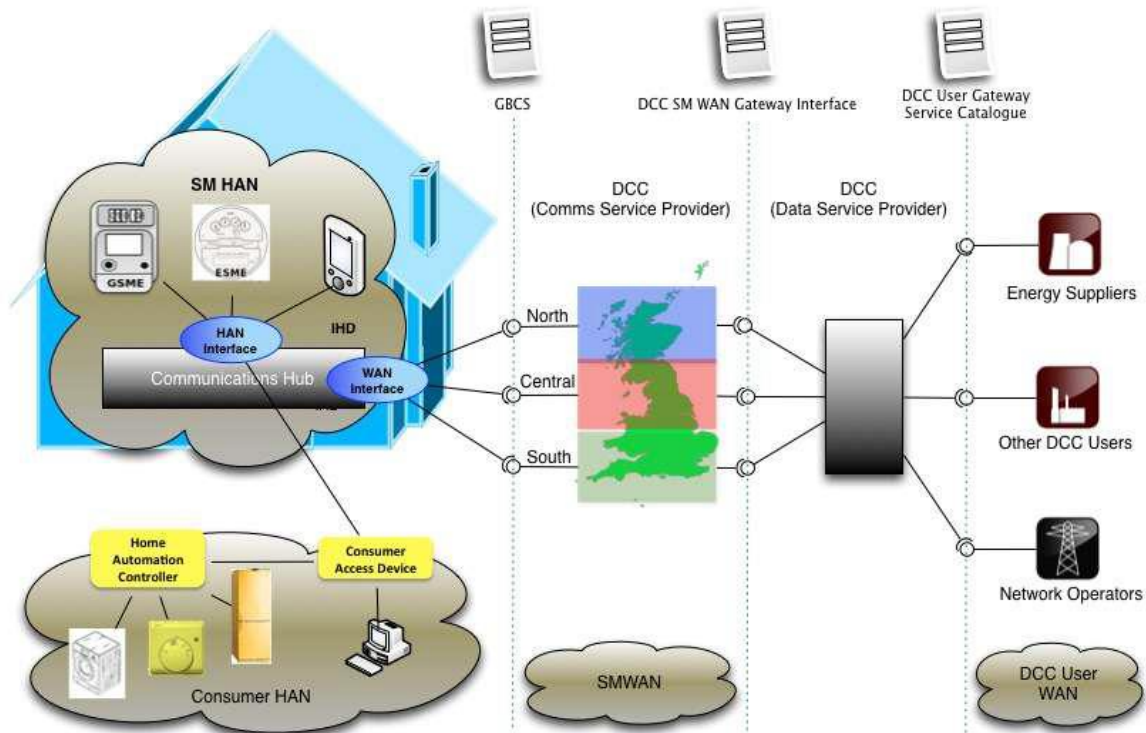


Figure 4: The main parts of the smart metering system (Source: DECC)

- 1.1. Existing electricity and gas meters will be replaced with smart versions which automatically pass accurate meter readings to energy suppliers, and support new functions including smart appliances and time-of-use tariffs.
- 1.2. All domestic consumers will be offered an In Home Display as part of the smart meter roll-out, which shows how much energy is being used, and how much it is costing, in near-real-time. The display can also show information about the amount of energy used in the past day, week, month and year.
- 1.3. The communications hub has two functions: it allows the smart meters and In Home Display to communicate with each other over a Home Area Network, in a similar way to wireless computer networks (Wi-Fi), and it provides a link to the Wide Area Network, which allows information to be sent to and from meters by suppliers, network operators and energy service companies.

Regulatory and Commercial Arrangements: Industry Roles

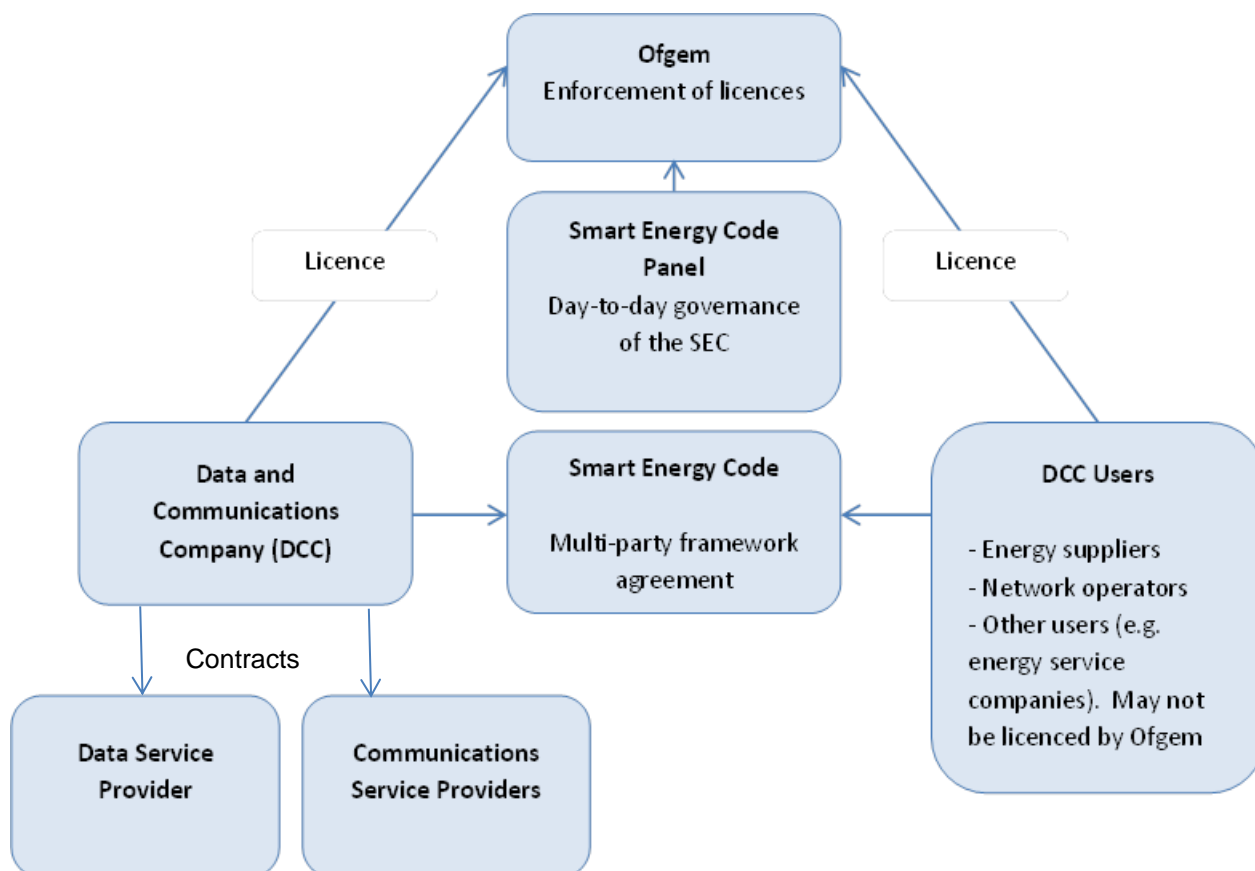


Figure 5: The structure of the enduring regulatory and commercial arrangements (Source: DECC)

- 1.4. Ofgem has a central role in driving delivery of the roll-out through its regulatory oversight of the obligations on energy suppliers, including the requirement on suppliers to take all reasonable steps to complete the roll-out by the end of 2020, and also has overall responsibility for oversight of the enduring smart meter system.
- 1.5. The DCC is granted a licence to provide communication services between smart meters and the business systems of DCC users (energy suppliers, network operators and other authorised service users). The DCC's role, as defined in its licence, is to ensure the provision of efficient, economical, coordinated and secure smart metering services. It does this primarily through its contracts with a separate Data Service Provider and the regional Communications Service Providers, plus other contractors. Given its exclusive role, the DCC Licensee is regulated by Ofgem to ensure that it does not exercise its market power to the ultimate disadvantage of energy consumers.

- 1.6. The Data Service Provider's primary responsibility is to develop, host and maintain a software application to provide functionality for access control, scheduling and translation for high volume messaging between the business systems of multiple DCC users and the smart metering communications hubs in consumer premises via the networks provided by the Communications Service Providers.
- 1.7. The Communications Service Providers' primary responsibilities are to: provide a Wide Area Network to communicate between the Data Service Provider and smart metering communication hubs; design, procure and own communications hubs, and provide these to energy suppliers.
- 1.8. The Smart Energy Code is a multiparty agreement that sets out the detailed day-to-day rules, rights and obligations for the different industry parties that use smart metering equipment and the information it provides. The DCC, energy suppliers and network operators are required by licence conditions to be parties to the Code and comply with its provisions. Other bodies that wish to use the DCC services, such as energy efficiency and energy service companies, must also comply with the Code. The initial content is being introduced by the Government, but the Code is self-governing, and will enable any party to raise change proposals, debate issues, and resolve disputes without the need for day-to-day regulatory intervention. It is managed by a Panel drawn from Smart Energy Code parties, with oversight where appropriate from Ofgem. Both the Panel and its administrative and secretariat support were established in 2013.

Annex B – Frequently Asked Questions

1. **What is a smart meter?**

Smart meters are the next generation of gas and electricity meters and can perform a range of intelligent functions. Unlike traditional meters which have to be read physically to give a customer or supplier information about how much energy has been used, they automatically pass accurate meter readings to energy suppliers and support new functions including enabling smart appliances. Domestic customers will be offered an In Home Display linked to their smart meter, enabling them to see what energy they are using and how much it is costing.

2. **Why are smart meters being introduced?**

Smart meters are an important step towards a modern and efficient gas and electricity system which will bring a wide range of benefits. Consumers will have near-real time information on their energy consumption to help them control their energy use, and avoid wasting energy and money; suppliers will have access to accurate data for billing and to improve their customer service; and energy networks will have better information upon which to manage their current activities, and assist the move towards smart grids which support sustainable energy supply.

3. **Who is in charge of the smart meter roll-out?**

The Government is requiring energy companies to replace 53 million meters with smart electricity and gas meters in all domestic properties, and smart or advanced meters in smaller non-domestic properties. It is setting rules to ensure that they do this in a way that is in the interests of consumers, including rules around data access and privacy, security, technical standards for the smart metering equipment, and meeting the needs of vulnerable consumers.

4. **How much will rolling out this new technology cost?**

DECC's latest Impact Assessment published in January 2014 estimates a positive net present benefit of £6.2 billion over the period to 2030, by delivering total benefits of around £17.1 billion and costs of around £10.9 billion.

Taking into account the costs and savings to energy companies, as well as energy savings to consumers, we expect the average dual fuel household to realise an annual bill saving of around £26 a year by 2020, with this saving increasing to £43 a year by 2030, in comparison to a situation without a smart

meter roll-out. For non-domestic dual fuel consumers, we expect annual bill savings of £200 by 2020.

5. When will I get a smart meter?

Smart meters will be rolled out as standard across the country by the end of 2020, and some energy companies are already installing smart meters now.

6. How much will it cost to get a smart meter installed?

Domestic consumers will not be charged separately for a smart meter or for the In Home Display. Under current arrangements, domestic consumers pay for the cost of their meter and its maintenance through their energy bills and this will be the same for a smart meter.

7. Do I have to have a smart meter?

There will not be a legal obligation on individuals to have a smart meter installed. The roll-out of smart meters is an important national modernisation programme. This will bring big benefits to consumers and the nation. We expect consumers to welcome the benefits smart meters will bring and we aim for all homes and small businesses to have smart meters by the end of 2020.

8. Who will be able to see my energy consumption data?

Consumers will have a choice about how their energy consumption data is used, apart from where it is required for billing and other regulated duties. Domestic consumers will be able to see their energy consumption data in near-real time on their In Home Display, and all consumers will be able to download historic data from their Home Area Network. They will be able to share data with third parties (such as switching sites) should they choose to.

9. Are smart meters safe?

Smart meters are covered by UK and EU product safety legislation, which requires manufacturers to ensure that any product placed on the market is safe. Public Health England, the independent adviser to the UK Government on public health, provides advice and information on the health implications of smart meters, as it does for a range of technologies commonly found in homes and businesses across the UK. Further information can be found on the Public Health England website:

<https://www.gov.uk/government/organisations/public-health-england>.

10. Will smart meters support prepayment?

A smart meter can work in prepayment or credit mode. Consumers can agree their payment method with their energy supplier. Prepayment consumers will see some particular benefits from having a smart meter. For example:

- Their energy company may offer new and more flexible ways of topping up their meter, including the ability to top-up over the phone or online.
- The smart meter can be set so that consumers do not run out of credit at night and won't be left without power when the shops are shut.

11. Where can I get more information?

Further information about smart meters can be found on the Gov.uk website (<https://www.gov.uk/government/policies/helping-households-to-cut-their-energy-bills/supporting-pages/smart-meters>) and the Smart Energy GB website (<http://www.smartenergygb.org/>).

Annex C – Glossary

This section provides a glossary of the principal terms used in the smart metering programme. The definitions in this glossary are not intended to be legally precise, but instead to assist in understanding this document.

Communications Hub

A Device which complies with the requirements of the Communications Hub Technical Specifications and which contains two, logically separate Devices: the Communications Hub Function and the Gas Proxy Function.

Communications Hub Technical Specifications

A document (which is to form part of the Smart Energy Code) which sets out the minimum physical, functional, interface and data requirements that will apply to a Communications Hub.

Communications Service Provider

Bodies awarded a contract to be a service provider of communications services to DCC as part of DCC's Relevant Services Capability. Arqiva Limited and Telefónica UK Limited have been appointed to provide these services.

Data and Communications Company (DCC)

The holder of the Smart Meter communication licence, Smart DCC Ltd.

Data Service Provider

The company awarded a contract to be a service provider of data services to DCC as part of DCC's Relevant Services Capability. CGI IT UK Limited has been appointed to provide these services.

DCC Licence

The licence awarded under section 7AB of the Gas Act 1986, and the licence awarded under section 5 of the Electricity Act, each allowing Smart DCC Ltd to undertake the activity of providing a smart meter communication service.

DCC Service Providers

Companies or persons from whom DCC procures Relevant Services Capability, principally the Data Service Provider and the Communications Service Providers.

Device

One of the following: (a) an Electricity Smart Meter; (b) a Gas Smart Meter; (c) a Communications Hub Function; (d) a Gas Proxy Function; (e) a Prepayment

Interface; (f) an Auxiliary Load Control; or (g) any Type 2 Device (e.g. an In Home Display).

Electricity Smart Meter

A Device meeting the requirements placed on Electricity Smart Metering Equipment in the SMETS.

End-to-End Smart Metering System

Any DCC System, Smart Metering System, User System or Registration Data Provision System.

Gas Smart Meter

A Device meeting the requirements placed on Gas Smart Metering Equipment in the SMETS.

GB Companion Specification

A document setting out, amongst other things, the detailed arrangements for communications between the DCC and Devices and the behaviour required of Devices in processing such communications.

Home Area Network

The means by which communication between Devices forming part of a Smart Metering System takes place within a premises and which is created by the Communications Hub Function.

In Home Display

An electronic Device, linked to a Smart Meter, which provides information on a consumer's energy consumption and ambient feedback.

Smart Energy Code

The Code designated by the Secretary of State pursuant to Condition 22 of the DCC licence and setting out, amongst other things, the contractual arrangements by which DCC provides services to users as part of its Authorised Business.

Smart Energy Code Subsidiary Documents

Documents that are referenced by and form part of the Smart Energy Code, and thus subject to the Smart Energy Code Modifications Process.

Smart Meter

A collective term for an Electricity Smart Meter and a Gas Smart Meter.

Smart Metering Equipment Technical Specifications (SMETS)

A specification (which is to form part of the Smart Energy Code) of the minimum technical requirements of Smart Metering Equipment. Communications Hubs are separately dealt with in the Communications Hub Technical Specifications.

Smart Metering Equipment Technical Specification version 1 (SMETS1)

The first version of the Smart Metering Equipment Technical Specification which was designated by the Secretary of State on 18 December 2012.

Smart Metering Equipment Technical Specification version 2 (SMETS2)

The second version of the Smart Metering Equipment Technical Specification which will be designated by the Secretary of State at a later time.

Smart Metering Equipment

A collective term for all SMETS equipment (Electricity Smart Meter, Gas Smart Meter, In Home Display, Prepayment Metering Interface Devices, and Home Area Network Controlled Auxiliary Load Control Switches, but not including the Communications Hub).

Wide Area Network

The network that is used for two way communication between Communications Hub Functions and the DCC.

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