

Smart Meters

Diagnosis and plans

1. The Government has a manifesto commitment to 'ensure that every home and business in the country is offered a smart meter by 2020, delivered as cost effectively as possible'. Smart metering is an investment programme to modernise our metering system and bring it into the digital age – some consumers still have meters based on technology that is over 100 years old. The Programme will replace 53 million meters with smart electricity and gas meters in all domestic properties, and smart or advanced meters in smaller non-domestic properties, by the end of 2020.

2. The Competition and Market Authority's provisional findings from its energy market investigation recognise the key contribution smart metering will make to strengthening retail competition and consumer engagement in the energy market.

3. Smart meters will deliver a range of benefits to consumers, energy companies and networks:

- domestic consumers will be offered an In Home Display (IHD) enabling them to see what energy they are using and how much it is costing;
- smart meters will bring an end to estimated billing, consumers will only be billed for the energy they actually use, helping them to better manage their budget. Suppliers will have access to accurate data for billing, removing the need to manually read meters;
- the rollout will: increase consumers' confidence in, and engagement with, the energy market; enable them to provide their data to third parties, such as switching sites; and, is an enabler for 24 hour switching. Taken together this will lead to a more competitive retail energy market;
- energy networks will have better information upon which to manage their activities and investments.
- smart meters are a platform for smart grids and will provide the foundation for demand-side response in conjunction with half-hourly settlement. As part of this, time of use tariffs and load control will help to manage peak electricity demand as part of a more flexible and responsive future energy system.
- smart meters can also be paired with 'consumer access devices' that will allow consumers access to the tariff and energy usage data in the smart meter. DECC expect that this will enable third-party SME developers to offer innovative services to consumers such as automated energy saving advice, interfaces to home energy management systems and analysis or display of information on a smartphone.

4. The Government has engaged widely with industry and other stakeholders in developing common technical standards for the smart metering equipment to ensure that it is interoperable and has the functions necessary to enable benefits realisation.

Implementation: a Competitive Rollout

5. Energy suppliers are responsible for planning and delivering the roll-out of smart meters, working within the legal framework established by the Government. The case for an energy supplier-led approach in GB is strong, as suppliers have the main relationship with consumers. This was consulted upon at an early stage of the Programme.¹

6. Moreover, unlike many other countries where metering is the responsibility of the network companies, in Great Britain metering is already the responsibility of energy suppliers. Energy suppliers also have strong commercial and financial incentives to engage consumers and deliver good quality service at lowest cost. Those energy suppliers that do not deliver the roll-out efficiently or do not provide for a good consumer experience risk losing customers to their competitors.

Value for Money

7. DECC's Impact Assessment has been developed and updated over the last six years. Costs and benefits have been quantified by collecting information from key stakeholders including industry, consumer groups and academia. The assumptions have been widely consulted on and have been benchmarked against international evidence as well as scrutinised by experts.

8. The latest Impact Assessment (IA)² for the Programme, 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. The Government will be publishing an updated Impact Assessment in the first half of 2016.

9. The Government reviews progress on the Smart Meter Programme on a continuing basis including tracking progress against the business case.

Consumer Engagement

10. All consumers stand to benefit from the control, convenience and energy system efficiencies that smart meters will bring outlined above. The Government considers consumer engagement to be a prerequisite for the success of the Programme. The Smart Metering Programme's Consumer Engagement Strategy³ (published in 2012) was developed in close consultation with stakeholders, informed by a range of UK and international evidence, and led to an approach whereby:

- energy suppliers will have the primary consumer engagement role as the main interface with their customers before, during and after installation;

¹ A consultation on smart metering for electricity and gas, May 2009:
http://webarchive.nationalarchives.gov.uk/20090703093717/http://www.decc.gov.uk/en/content/cms/consultations/smart_metering/smart_metering.aspx

² Smart Meter roll-out for the domestic and small and medium non-domestic sectors: impact assessment
<https://www.gov.uk/government/publications/smart-meter-roll-out-for-the-domestic-and-small-and-medium-non-domestic-sectors-gb-impact-assessment>

³ Government Response to the consultation on the Consumer Engagement Strategy, December 2012:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43042/7224-gov-resp-sm-consumer-engagement.pdf

- supplier engagement will be supported by a programme of centralised engagement undertaken by Smart Energy Great Britain (Smart Energy GB); and
- the Government will continue to communicate with consumers, in addition to the activity undertaken by the industry and consumer organisations, where this will provide additional benefit.

11. Smart Energy GB has published a Consumer Engagement Plan⁴, which was last updated in December 2014. Its plans include: national campaigns to raise general awareness and interest in smart meters; partnerships with local organisations to support engagement, particularly with vulnerable consumers; a website (in English and Welsh) with detailed information for consumers on smart meters; and a series of online and educational films.

12. The Government is committed to ensuring that all consumers benefit from smart meters, including low income and vulnerable customers, and has:

- introduced Licence Conditions on large energy suppliers that oblige Smart Energy GB to assist vulnerable, low income and pre-payment consumers;
- put in place the Smart Metering Installation Code of Practice (SMICoP), which requires energy suppliers to meet the needs of vulnerable consumers; and
- placed a requirement on energy suppliers to ensure that the In Home Display (IHD) is accessible for a broad range of users, including those with impairments.

13. Developing a framework of rules to protect consumers was an essential first step in establishing the smart metering system. In relation to privacy, the Data Access and Privacy Framework⁵ governs access to smart meter consumption data by energy suppliers, network operators and third parties. It establishes the purposes for which this information can be used and the choices available to consumers.

14. As technologies evolve and consumers gain confidence with the opportunities offered by smart metering, data access rules may need to evolve. The Government remains committed to monitoring the current Data Access and Privacy Framework and in March 2015 we consulted on the timing of a formal review of these regulations. We will report on this shortly.

Requirement to offer In-Home Displays

15. The Government is requiring energy suppliers to offer all their domestic consumers an In Home Display (IHD) where they install a smart metering system. The IHD is central to putting consumers in control of their energy use. For many consumers, the IHD will be the first opportunity to visualise their energy consumption

⁴ Smart Energy GB Consumer Engagement Plan, December 2014:
<http://www.smartenergygb.org/sites/default/files/engagement-plan-1213.pdf>

⁵ SMIP Data Access and Privacy Government response to consultation:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43046/7225-gov-resp-sm-data-access-privacy.pdf

– how much they use, when they use it, and how much it costs them. The IHD ensures that low income households can benefit from access to smart meter data, even in the absence of access to the Internet.

16. GB trials and international experience demonstrate that IHDs are instrumental to energy savings. The findings of the Early Learning Project (ELP)⁶, published in March 2013, provide substantial new evidence confirming that the IHD is an important tool for engaging consumers with energy-use information. The research showed that more than nine in ten of all smart meter customers surveyed who received an IHD had plugged it in at some point since the installation visit. Around six in ten reported that they generally still had their IHD plugged in.

17. There is evidence that other forms of complementary feedback may provide additional benefits. Innovative forms of feedback might, for example, integrate smart meter data into other devices, including tablets, smart phones or even televisions. However there is very little UK or international research in this area. Unknowns include whether such alternatives are likely to be effective and enduring methods of engaging consumers and whether they would add to the energy saving benefits of IHDs. Whereas IHDs have been shown to be accessible and used by most consumer types, the characteristics of consumers who would use alternatives to IHDs are not understood.

18. The Government therefore consulted this summer on allowing energy suppliers to apply for a derogation from existing requirements to offer consumers an IHD so that they could trial alternative innovative energy use engagement tools. This will provide the Government with the evidence it needs to ensure that approaches to providing consumers with feedback on their energy use remain optimised for consumers in a technologically fast moving and innovative environment.

Testing and Evaluation

19. The Government published its Monitoring and Evaluation Strategy⁷ in 2012. The Foundation Stage of the Programme, which began in April 2011, is also enabling suppliers to gain valuable learning and experience to inform preparations for the main installation stage of the Programme beginning in 2016, as well as 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 among their customers with smart meters.

20. The findings from the ELP show that a positive picture has emerged around consumer response to smart metering in the early roll out. Early smart metering customers are saving both electricity and gas as a result. Findings from the ELP also outlined the transformative benefits smart meters can bring to prepayment customers (who can often be low income or otherwise vulnerable customers). Being able to see an account balance on an easily-accessed IHD - rather than often awkwardly placed

⁶ Smart Meter Early Learning Project and Small-Scale Behaviour Trials: <https://www.gov.uk/government/publications/smart-metering-early-learning-project-and-small-scale-behaviour-trials>

⁷ SMIP: Government Response to consultation on information requirements for monitoring and evaluation: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43136/7206-gov-resp-cons-sm-monitor-evaluation.pdf

meters - reduces the risk of pre-payment customers accidentally self-disconnecting from energy supply when they run out of credit.

21. The ELP identified categories of energy user who would particularly benefit from tailored, follow-up support to ensure they are able to fully realise the benefits of smart meters: householders with specific difficulties, due to low levels of literacy, long-term illness, age or disability; Tenants; Low-income consumers; and, prepayment consumers.

22. To support suppliers and Smart Energy GB with these categories of consumers, the Government is leading on further work in 2015 to:

- assess the planned provision of follow-up support for vulnerable consumers and whether further steps are required to support provision of benefits to key groups of consumers;
- to develop good practice energy efficiency advice and guidance materials to be used at the point of installation, for use by installers and those providing follow-up support.

The Government's monitoring and evaluation plans will continue to be reviewed and refined as the Programme moves towards the main installation stage of the Programme.

Note - The Fourth Annual Report on the Rollout of Smart Meters in Great Britain was published on 18 November and provides an overall update on progress of the Programme.⁸

⁸ Fourth Annual Report on the Roll-out of Smart Meters: <https://www.gov.uk/government/publications/fourth-annual-report-on-the-roll-out-of-smart-meters>