

NON-DOMESTIC SMART METERING: Q&A

Your supplier may contact you to install smart metering, you may wish to arrange an installation, or you may simply want to know more about smart metering and what it will mean to you.

This document has been developed to answer questions about the existing and future provision of smart and advanced metering. It's mainly directed at customers, but we hope that it will be useful for others who work in the field of energy supply, such as representative organisations, intermediaries and energy buyers.

- 1 What is the Smart Metering Implementation Programme?
- 2 Does the Programme affect me?
- 3 How will smart metering be rolled out?
- 4 What's happening in the market now?
- 5 What will my smart meter and data cost me?
- 6 How will I benefit and how am I protected at the installation visit?
- 7 What are advanced meters?
- 8 Where can I find out more?



1. What is the Smart Metering Implementation Programme?

It's a major energy infrastructure project that will see the replacement or upgrading of over 50 million domestic and non-domestic electricity and gas meters by the end of 2020. It will help to deliver multiple benefits by:

- providing a platform for improved customer service, e.g. automated meter-reading and timely and accurate bills with no need for estimates
- giving detailed information about energy use to help identify opportunities for energy-saving
- helping to trigger energy efficiency improvements in buildings and equipment
- building a platform for future smart grids
- reducing our carbon emissions in line with our international obligations

The Programme is being led by the Department of Energy and Climate Change (DECC), and is being developed in close co-operation with interested parties, including the energy industry, Ofgem and consumer groups.

When will the smart metering roll-out start?

Most premises will have smart meters installed between 2015 and 2020, but some smart meters and smart-type meters are being installed now. Sections 4 and 7 explain what these are.

What does a smart meter do?

The meters that are to be rolled out under the Programme will be able to:

- Accurately record and store information for defined time-periods (down to half-hourly), enabling remote, accurate meter-readings with no need for estimates
- Offer two-way communications to and from the meter so that, for example, suppliers can read meters and update tariffs remotely
- Allow customers to collect and use consumption data by creating a "Home Area Network" to which they can securely connect data access devices
- Enable other devices to be linked to the Home Area Network, enabling customers to improve their control of energy consumption
- Support time-of-use tariffs, under which the price varies depending on the time of day at which electricity is used

- Support future management of energy supply (where the customer agrees) to help distribution companies manage supply and demand across their networks
- Allow remote enabling/disabling of supply by energy suppliers
- Measure electricity exported from microgeneration equipment to the network
- Communicate with microgeneration equipment within the property

There are other smart-type meters on the market at present that may fulfil many of these functions. We discuss these meters further in Sections 3 and 4. Advanced meters are also widely used in the non-domestic sector, and their functionality may develop over the coming years. We discuss them in detail in Section 7.



2. Does The Programme Affect Me?

The Programme focuses on domestic and smaller non-domestic sites. Around 2.1 million electricity sites and up to 1.5 million gas sites are in the smaller non-domestic category. Most of these sites are small, medium or micro-business premises, but a sizable number are smaller sites of large private and public sector organisations.

How do I know if mine is a “smaller” site?

You can ask your supplier, but you can probably work it out for yourself. We’re dealing with gas sites with annual consumption of less than 732MWh and electricity sites in profile classes 3 and 4. Your gas bill shows your level of consumption. Your electricity bill will show your profile class. The supply number (‘S’) is printed on it in a format similar to the one below. The first two digits of the number represent the profile class, in this example ‘03’ = profile class 3:

S	03	123	456
	23	6789	0123 456

I don’t fit in these categories.

That may be because your site uses larger volumes of electricity or gas – in that case, you’ll have, or will receive by 2014, an advanced meter. Or you may be categorised as a domestic customer, and will receive a smart meter as part of the wider roll-out.

How do you define a non-domestic customer or site?

Your supplier determines whether you are a domestic or non-domestic customer when it agrees an electricity or gas contract with you. A non-domestic customer is one who chiefly takes supply for non-domestic purposes. So, for example, someone who works from home, but whose consumption is mainly for household use, will be a domestic customer; a landlord with domestic tenants who pays bills based on a main meter at the property boundary, will normally be a non-domestic customer.

3. How Will Smart Metering be Rolled Out?

Who will provide the meters?

Energy suppliers are legally required to take all reasonable steps to ensure that, by 2020, customers receive supply through a smart meter (or, in certain cases, an advanced meter). They may install meters themselves or contract a company to do it for them. However, meters – particularly in the non-domestic market - may also be owned and installed by customers, or by parties acting on their behalf. In these circumstances, suppliers won’t have to install a smart meter, but will need to be sure that it meets the rules.

When will I get one?

Most smaller non-domestic sites will have smart meters installed between 2015 and December 2020, but some smart meters and smart-type meters are being installed now. Sections 4 and 7 explain what these are.

If your supplier or its agent installs the meter, it will contact you to arrange installation. Where existing meters have come to the end of their lives, suppliers are likely to take advantage of that opportunity to install a smart meter. But, as all meters will have to be smart (or, in some cases, advanced – see Section 7) by December 2020, some will be replaced earlier than would otherwise have been the case.

But I want one now.

You should contact your supplier, other suppliers, meter operators or energy service providers to see what’s on offer.

What will happen in the public sector?

The rules will apply to public sector sites, just as they will to businesses, and public sector customers can hold the same discussions with energy suppliers and service providers. You may also consider whether to use the Government Procurement Service (GPS) Framework Agreement for smart metering, which was put in place in 2009.

If you use the GPS’s electricity or gas supply contracts, you may talk to your supplier under those contracts about their approach to smart and advanced metering.

Will my smart meter work if I switch supplier?

Before you switch supplier, you should talk to your prospective new supplier to establish whether your meter will continue to work in smart mode. In the early stages of the smart meter roll-out in particular, not all suppliers will be able to operate meters in smart mode. There's therefore a risk of losing some smart functionality, although your meter will continue to work as a traditional meter.

In the longer term, legal obligations are expected to be placed on suppliers so that a smart meter will work in smart mode in most circumstances after you switch supplier. Again, you should check how the meter will work before you switch supplier.

The Smart Metering Programme helps ensure interoperability – that is, that all suppliers can use all meters in smart mode - in two ways:

- By working with all interested parties to deliver meters that can carry out a common set of minimum functions under the Smart Metering Equipment Technical Specification
- By establishing a new Data and Communications Company (DCC) to provide a communication service from smart meters to energy suppliers and other approved parties, such as networks

In the non-domestic sector, any suppliers not using the Data Communications Company will be able to make arrangements with the customer so that both parties can obtain the data they need.

Will everyone use the DCC?

In the non-domestic sector, suppliers won't have to use the DCC because of the wide range of other data and communications services already in use in the market. But we expect the majority of non-domestic smart meters – especially those installed in small and micro-businesses – to use the DCC.

What does it mean for me if my supplier doesn't use the DCC?

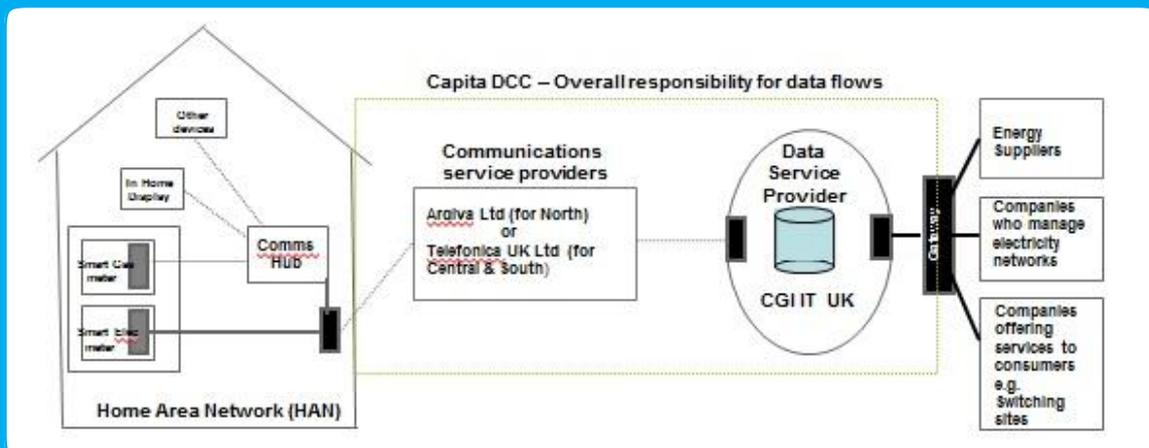
It will mean that some services available through the DCC may not be available to customers or some market participants. Your contract with your supplier and/or service provider will show what data you and others can access. But, if you switch supplier to one who wishes to use the DCC, the meter will function in full smart mode, although the new supplier may need to install a communications hub to talk to the DCC.

Is all of this set out in law?

Yes. Both the obligation on suppliers to take all reasonable steps to roll out smart meters by December 2020, and the rules about the installation visit (see Section 6) were put in place at the end of November 2012. Other parts of the regulatory, commercial, technical and policy framework will be put in place to support mass roll-out from 2015.

A second meter specification and rules governing relationships between different industry parties are being developed, and will be in place by 2014.

The illustration below shows how the total smart metering system will work



In this illustration, those ultimately sending and receiving data to and from meters are on the right. The Data and Communications Company (DCC) will collect data from meters and reconfigure them where required. The Wide Area Network (WAN) is the means by which data is passed to DCC. In the premises, data comes and goes through the communications hub in the way that a router works with a home computer. The internal system in the premises – of which the Home Area Network (HAN) is a key element - allows data collected by the meter to be viewed by the customer through an in-home display (in the domestic sector) or other consumer device (in the non-domestic sector) if one is used. In the future, the HAN could also be a means by which smart appliances in premises – eg fridges or air-conditioning – can be controlled.

Period	Meter Type			
	Compliant Smart Meters Meet DECC Smart Meter Technical Specification. Can be used by all suppliers once mass roll out begins	Smart -Type Meters Usually have two-way comms, but may not meet full technical specification or offer different functions	Advanced Meters Usually have one-way comms. Can provide half-hourly electricity and hourly gas data	Traditional Meters No comms capability, must be manually read
Now to April 2014	Yes	Yes	Yes	Yes, but must be replaced with compliant smart by December 2020
From introduction of “new and replacement obligation” (around end 2015) to December 2020	Yes	Yes, where there is a pre-existing contract for provision of advanced meters	Yes, where there is a pre-existing contract for their provision	No
2021 onwards	Yes	No, unless as a technical exception	No, unless as a technical exception	No

4. What’s Happening in the Market Now?

What should I ask if I’m offered a smart or advanced meter?

We explain some of the issues in the current market below, but, among the main questions you might ask the particular provider, are:

- Will the meter work – in smart or traditional mode – if I change supplier?
- Will it cost anything to install – and if so, how and when will you recover the costs?
- What functions does it have?
- What data will I have access to?
- Is there a charge for this data?

Are all smart meters the same? What’s on offer at the moment?

As explained in Section 3, DECC’s Smart Meter Implementation Programme will set a minimum technical specification. But DECC doesn’t have copyright on the words “smart meter”. They’re widely used to describe a range of “intelligent” meters with varying functionality. The common element is a degree of remote communication – usually two-way - with the meter, which means the information can be uploaded to the meter and downloaded from it. So, for example, tariff details can be remotely loaded onto the meter, and remote readings can be taken from it.

The table above shows the types of meters that are available, and when they may be installed. Section 7 explains the functionality of “advanced” meters, which have been on the market for many years.

So what happens if I have a meter installed now that meets your specification?

We are specifying both the metering and communications components of smart metering. This means that all “compliant” meters will, from around the end of 2015, be able to talk to the customer’s supplier. Before that point, some suppliers may not have put systems in place to deal with information from smart meters. But, from around the end of 2014, we expect a fully smart service to be in place across the industry.

So what happens if I have a meter installed now that’s “smart-type”, and doesn’t fully meet your specification?

When a smart-type meter is installed, the supplier will make communications arrangements that are separate to the Programme’s. The supplier will probably have systems in place to deal with information from the smart-type meter, and may well offer you services using that data. Your supplier may decide to offer you services that don’t use the Data and Communications Company, but this doesn’t mean you’ll receive an inferior service.

Why can’t Government and industry wait until the Data and Communications Company is up and running?

There’s already a functioning market for advanced and smart-type metering. And this metering can help customers use their energy more efficiently and receive a better customer service now. We don’t want to cut off that activity.

So I may have to pay again or have my meter replaced?

The Programme won’t require a meter that meets the initial technical specification to be replaced. And your meter may well be able to function fully once mass roll-out begins and all suppliers are operating a smart service.

Suppliers' and providers' approaches to costs will vary. Some will charge – but others may provide a meter as part of a wider service.

5. What Will My Smart Meter and Data Cost Me?

Who pays, and how much?

That will depend on who provides your meter, and whether and how they recover costs. In the non-domestic market, meters are often provided by energy service companies, as well as suppliers.

Suppliers will recover the costs of the roll-out from customers, as they do when installing meters now. Our Impact Assessments assume that the average cost of smart electricity and gas meters will be £43 and £53 respectively, with respective installation costs of £29 and £49 (this installation cost falls to £68 if both meters are installed together). There will be additional costs for the communications hub. These costs may vary once suppliers begin their roll-outs.

In theory, suppliers may apply these charges when a meter is installed, but, in practice, costs are likely to be recovered over time – usually over the life of the meter. Most suppliers are likely, as with traditional meters, to bundle the cost of the meter in the supply price. Your meter may be provided free as part of your supply service. You should establish this before the meter is installed.

How will you know if my bills reflect savings suppliers are making?

The Programme is putting in place arrangements to track the full range of benefits attributable to the roll-out. This will give assurance to The Government and to stakeholders that the roll-out is delivering value-for-money, and will enable the Programme to act if benefits aren't being delivered in line with expectations. The Government will be producing regular progress reports once mass roll-out begins.

Will I see meter costs on my bill?

The Programme won't require suppliers to show meter costs on bills, but they may do so.

Will I have to pay to access my consumption data?

This will also vary according to your contractual arrangements. Smart and advanced meters can provide detailed information, but that doesn't mean you have to take all of the information they collect. You should consider what level of data you need, and look at the offer. You may be charged for more detailed data, or it may be provided as part of a wider customer offering.

6. How Will I Benefit? What Can I Expect at the Installation?

How will I see information from the smart meter?

We expect non-domestic customers to get information by various routes, such as the web, smart-phone applications etc. The web – perhaps supported by written reports or more detailed bills – may be the most likely.

You may also be offered a display device - generically known as a Consumer Access Device - by your supplier (although

suppliers aren't required to offer them). These operate in a similar way to in-home displays. You'll also be able to buy one. These Devices allow you to take information from the smart meter via your meter's Home Area Network

As well as simply providing information about your energy consumption, suppliers or other companies may also provide advice on potential savings and how you can achieve them.

How can my meter help me manage energy?

Smart meters provide data that shows what energy you're using at different times of day, so they can highlight if energy is being used when it doesn't need to be. We want businesses to look at information from their meter and then look at the way in which they use energy.

That doesn't just mean how much is being used and when – although that's the first, essential step to managing energy use. It also means thinking about the energy efficiency of the fabric of the building and the equipment within it. The next step is considering what improvements you might make – if they involve expenditure, you may be able to finance them under the Green Deal and other programmes.

I rent my business premises – I can't change the energy efficiency of my building.

A smart meter will still help you track and plan your energy use, and can be the spur to using more energy-efficient equipment in your business. It can also help you understand the cost of equipment left on overnight – and could thus save you money at no cost. Your landlord may also be able to take measures that will help both of you under the Government's Green Deal.

What if I don't want smart data?

Then you don't have to take it. You'll lose some of the benefits of smart metering if you don't, but you'll still get accurate bills without letting in meter-readers or providing your own readings. You should no longer have to receive and pay estimated bills.

Remember that many of Britain's most successful businesses have installed smart or advanced metering of their own accord, to help them manage their energy use.

I already track my energy use and I've taken energy efficiency measures.

There's something in this for all of us. Benefits don't just fall to individual customers and suppliers, but to the country as a whole, particularly by helping us meet our carbon emissions targets and in providing a platform for smart grids.

The installation will interfere with my business.

Meter replacements are a normal part of business – they happen now. Suppliers are used to working with business to arrange installations at sensible times that meet the customer's needs. We're also putting in place rules that seek to ensure that inconvenience to customers is minimised.

What service can I expect around the installation visit?

We're putting in place rules around the installation visit to ensure a good customer experience, in which inconvenience should be minimised, and customers get the information they need about the meter and how it can help them. And there'll

be a Code of Practice governing the installation itself. Your energy supplier can tell you about the Code.

The Code formally applies to domestic and micro-business customers receiving smart meters installed under the Government's programme. Some suppliers may also voluntarily apply the Code to other installations, including those for other non-domestic customers.

Existing protections will still apply. Micro-businesses will be able to use redress schemes where complaints haven't been resolved, and there will be a right to compensation for missed appointments in certain circumstances.

Will the installer try to sell me things at the installation visit?

Approaches will vary between suppliers – some may market goods and services, other won't.

Approaches will also vary according to what type of business or organisation you are. At larger sites or at sites of multi-site organisations, the person dealing with the installer may well have nothing to do with the organisation's energy-related decisions. The supplier will therefore simply install the meter. For other businesses, the installation visit may provide a useful opportunity either to discuss other goods and services that could help you save energy or to arrange a separate discussion.

Will suppliers be able to disconnect me more easily, or force me onto prepayment if there are problems with payments?

Energy suppliers will have to follow existing procedures set out in existing rules before they can disconnect supply or switch a meter to prepay mode. And some suppliers may not use this facility – or may disable it.

Ofgem is now monitoring any use of remote disconnection or switching to prepay by non-domestic suppliers.

7. What Are Advanced Meters?

Do I have to have a smart meter?

The Government's vision is for all domestic and smaller non-domestic sites to have smart meters by 2020. For non-domestic customers, we're making arrangements to take account of existing meter installation programmes and certain technical matters. In certain circumstances, this will mean that suppliers can fulfil their metering obligations by installing "advanced" metering.

What's an advanced meter?

We define an advanced meter as being able to provide half-hourly electricity or hourly gas data that can be remotely accessed by a supplier. The data must also be available to the customer in a timely way.

Advanced metering may be integral to the meter, or the "advanced" functionality may be provided by having a pulse or optical reader take information from the traditional meter and then transmit it. In these cases, the "advanced" functionality can usually be added without interfering with the supply. This is more common in gas.

What can smart meters do that advanced meters can't?

All smart meters can meet the definition of an advanced meter, but not all advanced meters can be smart. Smart meters typically have two-way communications and can fulfil a wider range of functions.

Can advanced meters go on being installed?

Advanced meters have been installed in the non-domestic market for many years, and are still being installed. The Government recognised this by allowing the continued installation of advanced meters until April 2014, and beyond that where a customer has a pre-existing contract for installation of advanced metering. So those who've invested in advanced metering won't lose the value of that investment, and can continue to install common metering across their sites. Group customers may find this flexibility particularly useful.

Can it stay there forever?

No, the exceptions end in 2020. When these meters are replaced after 2020 in the normal course of business, smart will have to be installed, unless the meters are covered by the technical exemptions for larger gas meters and current transformer electricity meters [see below]. However, it will still be possible to have an "advanced"-type service from your smart meter if you require it.

What are these technical exceptions?

A small number of sites with higher loads have current transformer meters. Full smart functionality can't be applied to these meters. So we'll be requiring these meters to be given advanced metering functionality when they're installed or replaced, and in any case by 2020.

Larger gas meters – often referred to as "U16" meters – also can't receive fully smart functionality. So we're requiring these meters to be given advanced functionality when they're installed or replaced, and in any case by December 2020. This is likely to be through an attachment to the meter, which means that supply shouldn't be interrupted.



8. Where Can I Find Out More?

The Smart Metering Programme

Information about the Programme is available on the DECC website at:

http://www.decc.gov.uk/en/content/cms/tackling/smart_meters/smart_meters.aspx

Smart metering material published by DECC – and previously by BERR – can be found at:

<http://www.decc.gov.uk/publications/DirectoryListing.aspx?tags=27>

The Government's rules for advanced metering for larger electricity and gas sites – to be installed on a new and replacement basis from April 2009, and in any case by April 2014 - are found here:

<http://www.decc.gov.uk/media/viewfile.ashx?filepath=what we do/supporting consumers/smart energy meters/file49172.pdf&filetype=4>

The Office of Gas and Electricity Markets (Ofgem) regulates the electricity and gas industries, and will be responsible for ensuring compliance with smart metering rules. Ofgem's publications are available at:

<http://www.ofgem.gov.uk/Pages/OfgemHome.aspx>

Energy supply

Energy UK represents, among others, large domestic electricity and gas suppliers, all of which are active in the non-domestic market:

<http://www.energy-uk.org.uk/>

Energy UK has provided the secretariat for the developing Smart Metering Installation Code of Practice:

<http://www.energy-uk.org.uk/policy/smart-meters/-smart-metering-installation-code-of-practice.html>

Other non-domestic gas suppliers are represented by the Industrial and Commercial Shippers and Suppliers (ICOSS):

<http://icoss.org/>

All gas suppliers and shippers are represented by the Gas Forum:

<http://www.gasforum.co.uk/>

The Energy Suppliers Forum brings together small domestic and non-domestic suppliers:

<http://www.es-net.org.uk/>

Energy services

The Energy Services and Technology Association (ESTA) represents energy service providers offering data services and can offer information and advice to help you use energy more effectively:

<http://www.esta.org.uk/>

The Association of Meter Operators (AMO) represents companies that install and operate meters:

www.MeterOperators.org.uk

The Energy and Utilities Alliance (formerly the Society of British Gas Industries) represents a range of industry parties, including gas smart meter manufacturers:

<http://www.eua.org.uk/>

The British Electrotechnical and Allied Manufacturers Association (BEAMA) represents, among others, electricity smart meter manufacturers:

<http://www.beama.org.uk/>

The Carbon Trust provides independent advice on energy-saving for businesses, and also offers a range of services:

<http://www.carbontrust.com/home>

The public sector

The Government Procurement Service (GPS) framework agreement for smart metering is at:

<http://gps.cabinetoffice.gov.uk/contracts/rm679>

The GPS framework agreement for electricity supply is at:

<http://gps.cabinetoffice.gov.uk/contracts/rm550>

The framework agreement for gas supply is at:

<http://gps.cabinetoffice.gov.uk/contracts/rm476>

Consumer bodies

Consumer Focus is the statutory electricity and gas consumer body. It represents micro-business, as well as domestic, consumers:

<http://www.consumerfocus.org.uk/>

A number of organisations represent the interests of business customers:

The British Chambers of Commerce:

<http://www.britishchambers.org.uk/>

The Confederation of British Industry:

<http://www.cbi.org.uk/>

The Federation of Small Businesses:

<http://www.fsb.org.uk/>

The Forum for Private Business:

<http://www.fpb.org/>

The Association of Convenience Stores:

<http://www.acs.org.uk/>