

## Questions & Answers

### Does my SMETS1 meters have to be replaced?

In early 2018 the government and industry agreed to build interfaces which allow the earlier SMETS1 Smart Meters to be moved to the new DCC system supporting SMETS2 meters. This means that, although you may have lost Smart functionality when you changed supplier, when it is enrolled into the new DCC system that functionality will come back, and you'll be able to change suppliers without technical problems. The process of moving the meters across system is called enrolment and adoption.

### What is the SMETS1 end date?

The government are keen for all SMETS smart meters to interoperate on one system so customers can switch suppliers easily. To force this they are stopping suppliers installing the older SMETS1 meters and forcing them to move to the new SMETS2 meters. So suppliers cannot install SMETS1 meters (or upgrade firmware to SMETS1) after 5<sup>th</sup> December 2018. Note that some suppliers have a special dispensation and can carry on until 15<sup>th</sup> March 2019.

Additionally due to the extra complexity of prepayments meters, the end date for them is 15<sup>th</sup> March 2019. But what does this mean for you - not a lot as it mainly impacts the suppliers, but at least it means the better SMETS2 meter are coming in volume.

### Are smart meters safe?

Yes. DECC (Department of Energy and Climate Change) have stated that all smart meters are subject to the same safety regulations and testing of any in-home technological devices, including baby monitors and mobile phones.

### What is a SMETS2 meter?

About 500 meters have now been installed to the Smart Metering Equipment Technical Specification (SMETS) 2 standard. These are the most advanced meters available and communicate through the new Data Communications Company (DCC). Suppliers are obliged by government rules to stop installing SMETS1 meters in October 2018 and only install these new SMETS2 meters. Suppliers started to install SMETS2 meters in Q2 2017 but they will only be installed in larger volumes from the middle of 2018.

### When will my SMETS1 meter operate again?

The upgrade and transfer of SMETS1 meters into DCC's systems is planned to occur between the end of November 2018 and the end of June 2019. For more details see Annex B on this DCC planning document. However there is a risk that these timescales will slip as the complex transfer process has not been tested yet.

Provided your meters are on the list of meters which can fit into this process on table "SMETS 1 Meters for adoption by DCC" they should start working again during that transfer period.

### Will my meters have to be changed if I change supplier?

There are a number of meter standards out there currently, only the latest SMETS2 standard is fully interoperable, meaning only SMETS2 are supported by all suppliers and allow customers to switch without losing any services or requiring any equipment changes.

The SMETS1 meters currently being installed usually require replacing when you change supplier. However as the programme has been so slow in implementation, there is now an agreement to allow SMETS1 meters to be enrolled into the future systems and thus allow smooth switching for customers during 2018/19.

So today it is very likely that your smart meters will have to be replaced if you want to continue their smart functionality. If you don't want the smart functionality, most suppliers will leave them on the wall and treat them as a traditional meter until they can be migrated to the new DCC system.

### **Do I have to be at home for the installation?**

You must be at home for the installation even if your meter box is outside. The government rules under SMICOP (Smart Installation Code of Practice) say that suppliers must explain to you how the Smart Meter and In Home Display work. Additionally it is considered dangerous to disconnect and reconnect the supply without checking with the householder that it is safe to do so.

### **What will energy companies do with the information they collect about my energy consumption?**

Under Ofgem codes published July 2013, you can dictate how much data your energy supplier can retrieve from your smart meter and whether your supplier can share that information with third parties. You can also decide whether or not your supplier can use that information for marketing purposes. Just call your supplier if you want to check or change your preferences.

### **How does a smart meter work?**

A smart meter works by communicating directly with your energy supplier and network operator, so the company will always have an accurate meter reading and there's no need for you to take a meter reading yourself. Smart meters can work in a variety of different ways, including using wireless mobile phone type technology to send data. See our Technical page for more information.

### **Should I wait for a SMETS2 meter?**

There are three types of smart meters, two in use currently (ADM & SMETS1), and one (SMETS2) is only now being installed in small volumes. Only the SMETS2 meter, in conjunction with the new systems provided by DCC, will allow all customers to switch and allow more options for communications. Unless you want to try out the new technology early, we suggest you wait for a SMETS2 meter; eventually all meters will be replaced by these.

### **Can my supply be turned off remotely?**

Smart meters have the facility to remotely disconnect and reconnect both the electricity and gas supply. However most suppliers seem to have decided it is too dangerous to remotely disconnect or reconnect, as in the case of disconnection they cannot always be sure that the customer isn't relying on a supply for serious health reasons and in the case of reconnection the customer may have left a cooker on for example.

### **How do I top-up my smart meter PAYG if the mobile network is down?**

Normally your PAYG top-up will be sent automatically to the smart meter, however if the communications link through the mobile network is not available then this cannot happen. However you can enter the long authorisation number that you received when you paid for the credit into the meter to apply your credit. However this is not easy to do, so if you have difficulty with the entry of this number then your supplier can provide a special keypad to allow you to enter the authorisation number more easily and, probably, in a more convenient location. These devices are known as PPMIDs (integrated in-home display (IHD) and pre-payment meter interface device).

### **How do Smart Meters send data?**

A Smart Meter sends data through the Wide Area Network (WAN) to the company responsible for collecting the data and passing it on to other businesses such as suppliers; for the latest SMETS2 meters this company will usually be the DCC (Data Communications Company) which the government has set up especially for this role. Depending on the Communications Service Provider, which varies by areas of the UK, the technology can change depending on what works best in a local area. Sometimes your meter will communicate directly with DCC and sometimes it will talk through meters around you to step to a meter which has direct communications with DCC. This form of communications looks like a mesh when you draw out the links between meters and is known as a Mesh.

### **Can I look at my energy usage on the internet?**

You will be able to view your energy usage on the internet at some stage. Suppliers are all working on new systems to make this possible.

### How long will it take to install a Smart Meter?

A typical installation will take about one hour. However this will vary according to your property and where your meters are located.

### How much data is stored on a Smart Meter?

The specification for these Smart Meters requires 13 months' worth of consumption data to be stored at the highest level of detail, which is at half hourly measurement intervals.

### Why does my IHD show CO<sub>2</sub>?

The measure of CO<sub>2</sub> on your IHD (In Home Display) shows the amount of CO<sub>2</sub> given off by power stations generating the electricity you are using. The calculation is set by Ofgem based on the average amount of carbon dioxide emitted for every kWh of energy generated. The average is for the fuel mix across entire UK energy industry, so may be misleading if you have opted for a CO<sub>2</sub> free source such as Wind or Nuclear.

### Can I lay a cable to help join the devices together?

The meters and IHD can only be joined through a radio link. This applies to all three standards of meters pre-SMETS, SMETS1 and SMETS2. However one or two suppliers may be able to offer a zigbee booster, this is similar to the wireless booster you can buy for your home broadband and just plug into a power socket.

Our recommendation would be to let your supplier sort it out, as more powerful communications hub (868MHz) will be available to suppliers to install with SMETS2 meters where needed later in 2018.

### Can smart meters be upgraded?

Smart meters can have a firmware upgrade just like your computer or mobile phone. The upgrade will be used to fix faults and add new functionality and should be carried out in the background without any impact on the customer.

### Why is two way communications important?

Smart meters send meter reading and event information to suppliers. Supplier can send product and payment details to the meter when you want to change your product or payment terms. Additionally this two way communications will support Pay As You Go for energy.

### Are there special considerations for the location of a Smart Meter?

When a meter fitter first arrives at your premises they will usually check the signal available with a special tool and decide if the installation can go ahead; in some cases an additional aerial or alternate communications system can be used if the signal is poor. The Smart Meters must be fitted in place of or near your old meters as it is too expensive to move the incoming power cable and gas connection, and not good to have long cables from the main fuse (cutout) to the meter.

### How do I know the meters are accurate?

Just as with traditional meters, smart meters must be certified by the Regulatory Delivery section of the Department for Business, Energy & Industrial Strategy.

### How does the smart meter record energy generation if a solar panel is installed?

All the smart meter meters will record the export and import separately, and you will be able to see the readings by stepping through them on the meter display. All the meters should show all 4 power quadrants. You can ignore the reactive ones and just look at active import and export.

Power quadrants:

- Active energy import (Wh) - this is what we are billed for normally
- Reactive energy import (varh)
- Active energy export (Wh) - this is your useful export power
- Reactive energy export (varh).

If you have just the one meter it will measure the net energy consumption, i.e. just your surplus export. The bad news is that many companies have not set up their systems to automatically collect or use the export information, as it would have taken time and money they don't have for such a low volume user base.

#### **What is a smart meter?**

A Smart Meter is a new kind of meter to measure your energy, they are available for electricity and gas. Smart meters allow communications to and from your energy supplier and distribution network operator, and they can therefore send meter readings automatically. An In Home Display will be provided with your meter to allow you to see how much energy you are using and what it is costing. There have been a number of standards in the UK, but the latest is called a SMETS2 meter.

#### **What is dithering?**

When a Smart Meter loses power and powers up it sends an alert message to suppliers and network operators to let them know. If a large area had lost power and thus a large number of meters were to send these messages at once it would put a heavy load on the communications network. To prevent this the meters "dither", that is to say they all wait a short random period before sending those first messages thus avoiding the simultaneous peak. For the first two years (to September 2018) the dithering period will be up to 2 minutes. After that a decision will be made on whether to set it to the default 5 minutes.

#### **How often will my IHD (In Home Display) be updated with data from my meters?**

Your IHD will be updated by your electricity meter about every 10 seconds and by your gas meter about every 30 minutes. The gas meter updates less often in order to preserve its battery life which in normal use is expected to be at least 10 years.

#### **How do I read a smart meter?**

It is possible to read information from your smart meter, unfortunately there are many different makes out there with different controls, so please contact your supplier for additional information. Your supplier's web site will have often have the manuals available for viewing.

#### **My supplier says my signal is too weak?**

Smart meters communicate through mobile communications and so the signal strength is an important factor to consider for installation.

For SMETS1 meters the installer will usually test on site and make a decision there and then whether to install. If there is not a sufficient signal they will usually walk away.

For SMETS2 there are more options. The communications are provided by the Data Communications Company (DCC) and suppliers can check that a premises has communications before visiting a site. Once on site they can check with a signal checking device if the signal is strong enough in the meter location. If it isn't they can fit a number of different aerials to try to boost the signal. If that doesn't work an external aerial or an alternative mesh communications method is available in some areas. Even then they can leave the meter de-commissioned and ask the DCC to get the communications working.

#### **What is a PPMID?**

Customers who opt to pre-pay for their energy should have a fall back means of applying a top up locally to their meter in the event of a temporary loss of WAN communications. This can be most easily achieved with a PPMID (integrated in-home display (IHD) and pre-payment meter interface) device, which allows the customer to easily enter a purchase reference number.

#### **What is a traditional meter?**

A traditional, dumb or legacy meter are all names for the kinds of mechanical or electronic meters that have been used for many years. These older meters do not have two way communications. The preferred term for them is a traditional meter.

#### **How do I read an In Home Display?**

The In Home Display (previously known as Smart Meter Display or Home Energy Monitor) has been designed to provide information to customers in their homes, and so should be easy to understand. For both electricity and gas it will display your energy consumption in either pounds and pence or kilowatt

hours, helping you understand how you are using energy in your home at any given point in time. Unfortunately there are many different makes out there with different controls, so please contact your supplier for additional information.

#### **Are the meters battery powered?**

The electricity meter is mains powered but the gas meter is battery powered. The gas meter battery can be replaced by a Smart Meter Installer and is expected to last the life of the meter, however its life can be greatly reduced heavy communications such as repeated firmware updates.

#### **Could my IHD (In Home Display) link to my neighbour's meters?**

Your IHD is paired to your own meters by the installer. It won't pick up information from your neighbours and can't be used in another house. If you need a replacement IHD this will have to be paired with your meters.

#### **Do I require a broadband connection or wi-fi in my home to be able to use a smart meter?**

Smart meters don't need a broadband connection or wi-fi in your home as they use either the GSM (Global System for Mobile communications) mobile networks just like your mobile phone, or use a local mesh communications network (DCC only) to hop from meter to meter until a link to the GSM mobile network is found.

#### **What is a SMETS1 meter?**

Over 8 million meters built to the Smart Metering Equipment Technical Specification (SMETS) 1 have now been installed. These meters are better than ADM meters (Advanced Domestic Meters) but not as good as SMETS2 meters. Each supplier uses them through a different support and communications network; this means they have different functionality and effectively limits the customer from moving from one supplier to another with the same smart meter. For this reason, as SMETS1 meters are commonly in use, suppliers often have to change the meter to provide a continuing smart service. Meters to the SMETS2 standard do not have this restriction.

#### **Do smart meters work with home generated renewable energy?**

Traditional meters are only capable of recording consumption and consequently don't take into account any energy generated by a household. If you have or are planning to install solar panels or any other renewable energy generating system in your home, a smart meter will enable you to measure how much energy you produce. The smart meter will also calculate whether or not there is a surplus which you could sell back to the grid.

