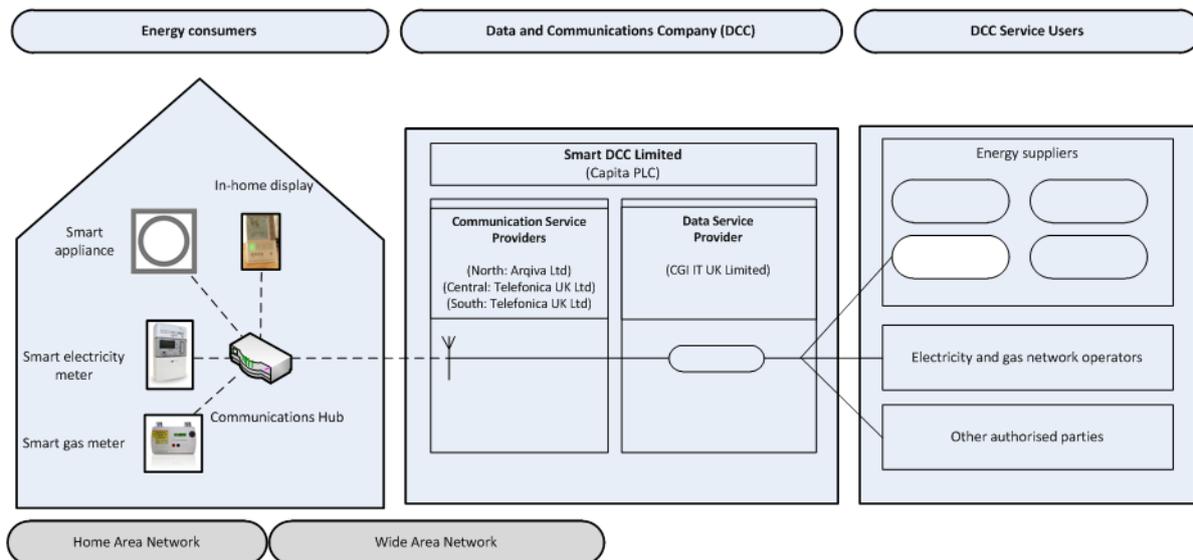


The Smart Metering System

This leaflet explains how the smart metering system works from late 2015, when a new shared smart metering national infrastructure is in place. Some energy suppliers are already offering smart meters using their own systems and technologies.

The diagram below illustrates the main parts of the smart metering systems showing the equipment and communications within energy consumers' homes. It shows the organisations that will use the information provided by smart meters (DCC Service Users), and the system provided by the Data and Communication Company (DCC) which will link these organisations with the smart meters.



Equipment and communications within energy consumers' homes

The smart metering equipment installed by energy suppliers will normally consist of a smart electricity meter, a smart gas meter, and a communications hub. Energy suppliers will offer all domestic customers an In Home Display at no cost as part of the installation process. These devices are explained below.

Smart electricity and gas meters

Existing electricity and gas meters in consumers' homes will be replaced with smart versions. Unlike traditional meters, they automatically pass accurate meter readings to energy suppliers, and support new functions including enabling smart appliances and time of use tariffs.

In-Home Display

The in-home display will allow consumers to see what energy they are using 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. This will help people to understand and control their energy consumption.

Communications hub

The communications hub has two functions. Firstly 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). Secondly it provides a link to the Wide Area Network which allows information to be sent to and from meters by energy suppliers, energy network operators and energy service companies.

Organisations that will use the information provided by smart meters (DCC Service Users)

A number of organisations will communicate with smart meters. Consumers will have a choice about how their energy consumption data is used, apart from where it is required for billing and other activities that energy companies are legally required to undertake.

Energy Suppliers A consumers' energy supplier will communicate remotely with smart metering equipment to take meter readings, to update pricing information on the In-Home Display and to take readings on change of supplier or change of tenancy.

Energy Networks The organisations that operate the energy network infrastructure will be able to access data, to help them understand the loads on their network at the local level and to respond to loss of supply issues. Energy networks will have better information upon which to manage and plan current activities and move towards smart grids which support sustainable energy supply.

Organisations offering services Consumers can choose to allow other organisations to have access to the data from their smart meter. For example, switching sites could use accurate information on the amount of energy used to advise consumers on the best tariff and energy supplier. As the rollout proceeds, an increasing range of devices should become available to help consumers manage their energy usage, including smart appliances which can operate automatically when electricity is cheaper.

Smart meter communications outside the home: the Data Communications Company and the Wide Area Network

The Data and Communications Company will put in place communications across Great Britain to send and receive information from smart meters to energy suppliers, energy network operators and energy service companies. The Data and Communications Company will be operated by Capita PLC under a licence regulated by Ofgem.

The Data and Communications Company will manage three main subcontractors. CGI IT UK Limited is the Data Services Provider which controls the movement of messages to and from smart meters. Arqiva Limited and Telefonica UK Limited are the Communications Service Providers and will put in place the Wide Area Network. Arqiva will do this for Scotland and the north of England. Telefónica will cover Wales and the rest of England.

Further information

Further information about smart meters can be found on the Government's website at <https://www.gov.uk/smart-meters-how-they-work>.

Leaflets in this series

Smart Metering Implementation Programme: information leaflet:

<https://www.gov.uk/government/publications/smart-metering-implementation-programme-information-leaflet>

Smart Metering Implementation Programme non-domestic leaflet:

<https://www.gov.uk/government/publications/smart-metering-non-domestic-leaflet>