



Department
of Energy &
Climate Change

Smart Meters, Great Britain, Quarterly report to end December 2015

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Any enquiries regarding this publication should be sent to publication (including suggestions for developing the publication) should be sent to DECC's Smart Meter Statistics Team at the following email address: EnergyEfficiency.Stats@decc.gsi.gov.uk.

This document is also available from our website at www.gov.uk/decc

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Executive summary

This quarterly release presents statistics on the roll-out of smart meters in Great Britain. It includes information on the number of smart meters installed in domestic properties and smaller non-domestic sites during the final quarter of 2015 by the large energy suppliers; and during the full 2015 calendar year, by the small energy suppliers. This is the first time figures from small suppliers are reported on in this quarterly series.

The report also presents the total number of meters in operation up until 31 December 2015 for both large and small energy suppliers.

Key findings:

Domestic properties

- A total of 402,600¹ smart meters were installed in domestic properties by the large energy suppliers in the final quarter of 2015 (169,200 gas and 233,400 electricity meters). This represents a 20 per cent increase in smart meter installations compared to the previous quarter.
- Small energy suppliers reported installing a total of 285,000 smart meters in domestic properties during the 2015 calendar year.
- As at 31 December 2015, there were 2.32 million smart meters operating in smart mode across domestic properties in Great Britain, by both large (1.88 million) and small (0.44 million) suppliers.

Non-domestic sites

- In the final quarter of 2015, there were 25,500 smart and advanced meters installed in smaller non-domestic sites by large energy suppliers (of which 21,900 were advanced meters and the rest smart meters). This is a 12 percent increase compared to quarter three 2015.
- Small energy suppliers have reported installing a total of 61,600 smart and advanced meters in smaller non-domestic sites during the calendar year 2015, of which, around 200 were smart meters and the rest advanced.
- As at 31 December 2015, there were 525,900 non-domestic smart and advanced meters operating in smart mode or with advanced functionality by large energy suppliers. This represents one in five of all non-domestic meters operated by the large energy suppliers.
- Small suppliers reported 285,000 smart and advanced meters operating in smart mode or with advanced functionality as at 31 December 2015 in smaller non-domestic sites.

¹ Individual numbers are independently rounded to the nearest 100 and can result in totals that are different from the sum of their constituent items.

Chapter 1: Introduction to smart metering

1.1 Overview

The Government has a manifesto commitment to ensure that every home and business in the country is offered a smart meter by the end of 2020, delivered as cost effectively as possible.

The Smart Metering Programme aims to roll-out over 50 million smart gas and electricity meters to all domestic properties and smart or advanced meters to smaller non-domestic sites in Great Britain by the end of 2020 - impacting approximately 30 million premises. Further information about the Programme can be found on the Gov.uk website.

The Smart Metering rollout obligation requires energy suppliers to take all reasonable steps to replace traditional energy meters in both domestic properties and smaller non-domestic sites with smart or advanced meters (as outlined in Section 1.3) by the end of 2020. The roll-out and installation of smart meters across Great Britain is supplier-led where the suppliers are free to plan their own installation strategy.

The Smart Metering Programme is designed to be delivered in two phases. The first phase is the Foundation Stage, during which the Government is engaging with the energy industry, consumer groups and other stakeholders to put commercial and regulatory frameworks in place to support smart metering, trial and test systems and learn lessons from early installations to enhance the consumer experience. The second phase is the main roll-out stage, which is when most householders will have smart meters installed by their energy company (in the period 2016 to 2020).

Some energy suppliers have used the Foundation Stage to undertake testing and trialling of installations to help ensure their customers have a positive experience of smart metering. Therefore, some customers will receive smart meters during the Foundation Stage, as energy suppliers start up their programmes. Other energy suppliers have planned to begin installations during the main roll-out stage. As such, fluctuations in the number of smart meters installed each quarter is expected, as different energy suppliers install smart meters according to their own strategy.

Energy suppliers are responsible for planning and delivering the installation of smart meters for their customers and are free to plan the roll-out in a way that suits their business and the needs of their customers, subject to the requirement to complete the roll-out by the end of 2020. Energy suppliers' proposed approaches to the roll-out vary and take into account factors such as the location of their customer base, installation workforce and when their customers would need their traditional meters replaced on a routine basis. The approach adopted by energy suppliers may change as they progress through the roll-out.

The first statistical report on the progress of Smart Metering roll-out obligation for the large energy suppliers was published in September 2013 and has been updated every quarter since. This is the first quarterly report to publish figures on small suppliers (see Section 1.4 for further details on large and small suppliers).

DECC will continue to monitor smart meter installations and the number of meters in operation in Great Britain on a quarterly basis until the end of the Programme. More detailed information on the methodology used to produce estimates of the number of meters installed and operating during the roll-out period is included in the accompanying methodology note, available at:

<https://www.gov.uk/government/collections/smart-meters-statistics>

1.2 Types of Premise

Under the smart meter obligations, energy suppliers are required to replace traditional meters with smart or advanced meters, in two types of property.

Domestic Properties

Domestic properties are defined as properties where the customer is supplied with electricity or gas wholly or mainly for domestic purposes.

Smaller non-domestic sites

These are business or public sector customers whose sites use low to medium amounts of electricity (defined as a smaller non-domestic site falling within Balancing and Settlement Code Profile Classes² 1, 2, 3 or 4) or gas (defined as a smaller non-domestic site using less than 732MWh of gas per annum). The sites therefore range from individual micro- and small businesses to the smaller sites of private and public sector organisations.

1.3 Types of Gas and Electricity meters

Smart Meters

Smart meters are the next generation of gas and electricity meters and offer a range of intelligent functions. All domestic consumers will be offered an In-Home Display (IHD) 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. This information will help them control and manage their energy use, save money and reduce emissions. Smart meters will also bring an end to estimated meter readings, providing consumers with more accurate bills.

A smart meter is compliant with the Smart Meter Equipment Technical Specification³ (SMETS) and has functionality such as being able to transmit meter readings to energy suppliers and receive data remotely. Each large energy supplier reports the

² <https://www.elexon.co.uk/knowledgebase/profile-classes/>

³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/381535/SMIP_E2E_SMETS2.pdf

number of smart meters it has installed and is operating in smart mode to DECC on a quarterly basis, while small suppliers report to DECC on an annual basis. This includes both meters that are SMETS compliant and those they expect to upgrade to become SMETS compliant. Some smart meters currently installed will need to receive updates before they are fully SMETS compliant.

Only smart meters that meet the SMETS regulations count towards supplier roll-out obligations. Energy suppliers must take all reasonable steps to replace other meter types in domestic properties with these meters by the end of 2020 in order to fulfil their licence conditions.

Smart-type Meters (only installed in domestic properties)

Some suppliers have chosen to make an early start by rolling out smart-type meters without the full functionalities included in SMETS. Energy suppliers have learned lessons from installing and operating smart-type meters, which will benefit the smart meter roll-out and has allowed their customers to have early access to some of the benefits of smart metering. Smart-type meters will need to be replaced with SMETS compliant smart meters by the end of 2020 in accordance with energy suppliers' roll-out obligations.

All data relating to smart-type meters are referred to as such, in this report. Smart-type meters are not classed as 'smart meters' and therefore do not count towards the supplier's roll-out obligation in domestic sites. However smart-type meters exceed the minimum specification for advanced meters (described below) and will count towards supplier roll-out obligations in smaller non-domestic sites.

Advanced Meters (only installed in smaller non-domestic sites)

Advanced meter must, at minimum, be able to store half-hourly electricity and hourly gas data, to which the customer can have timely access and the supplier has remote access. However, meters described as "advanced" in this report may have additional functions found in a smart meter that meets the Government's technical specification.

In smaller non-domestic sites, advanced meters may be installed as an alternative to SMETS-compliant smart meters until April 2016. They may also be installed between April 2016 and December 2020 where a contract to install such meters was in place before April 2016. These meters will not have to be replaced with SMETS meters before 2020 and therefore count towards the supplier's roll-out obligation.

Traditional Meters

Traditional meters are currently found in most domestic and smaller non-domestic sites and do not have any smart capability. Traditional meters will be replaced by smart and advanced meters during the smart meter roll-out.

1.4 Types of Supplier

Large energy suppliers

Large energy suppliers are defined as those that supply gas or electricity to at least 250,000 domestic customers; they may also supply non-domestic sites. A large energy supplier need only supply 250,000 domestic customers a single fuel to be classed as a large energy supplier (i.e. an energy supplier supplying gas to 250,000 domestic customers but who does not supply electricity customers is still classed as a large energy supplier). Under their supply licence conditions large energy suppliers are required to provide numbers of smart meter installations and meters in operation to DECC on a quarterly basis. This information is reported in the quarterly statistics.

Currently nine energy suppliers meet these criteria and are thus referred to as large energy suppliers throughout this report (see Annex A for further details).

Small energy suppliers

Small energy suppliers are defined as those that supply gas to less than 250,000 domestic customers and electricity to less than 250,000 domestic customers; they may also supply non-domestic sites. Under their supply licence conditions, small energy suppliers are required to provide information to DECC on an annual basis and are therefore reported on at the end of the calendar year (to 31 December).

Currently 38 small energy suppliers are required to provide data returns under these conditions and are referred to as small suppliers throughout this report (see Annex A for further details).

1.5 Further information

The next quarterly publication is planned for publication on 30 June 2016 at 9.30am. The content and format of the quarterly smart meters statistical report is currently being reviewed. The format and context may be subject to change in future versions.

Any enquiries or comments in relation to this statistical release (including suggestions for developing the publication) should be sent to Masuma Ahmed in DECC's Smart Meter Statistics Team at the following email address:

EnergyEfficiency.Stats@decc.gsi.gov.uk

Contact telephone: 0300 068 5922

The statistician responsible for this publication is Julian Prime.

Further information on energy statistics is available at:

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics>

Chapter 2: Domestic Smart Metering

This chapter reports on the latest number of smart meters installed in domestic properties during the final quarter of 2015 by the large energy suppliers; and during the full 2015 calendar year, by small energy suppliers. The number of smart meters operated in domestic properties as at 31 December 2015 is also reported for both large and small suppliers.

Detailed breakdowns on installation and operating figures can be found in the accompanying tables to this report, available at:

<https://www.gov.uk/government/collections/smart-meters-statistics>

2.1 Smart meter installations in domestic properties

A total of 402,600 smart meters were installed by the large energy suppliers in the final quarter of 2015 (169,200 gas and 233,400 electricity meters). This represents a 20 per cent increase in smart meter installations compared to the previous quarter (23 per cent increase for gas smart meters and 18 per cent increase for electricity smart meters).

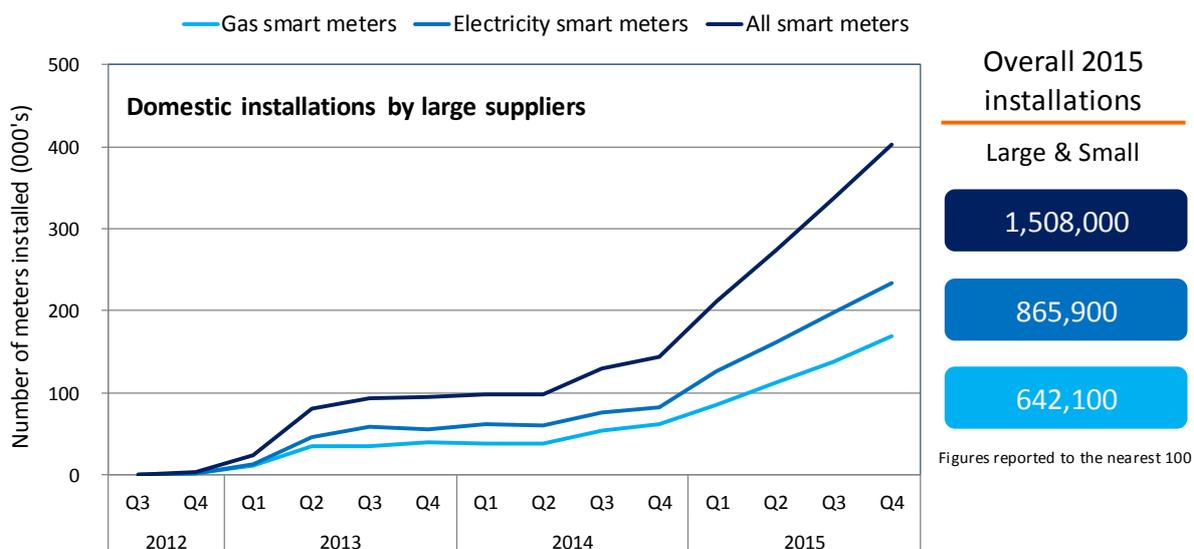
From the start of the Programme up until 31 December 2015, large energy suppliers have reported installing an estimated total of 2,066,100 smart meters across domestic properties in Great Britain – 835,500 of which have been gas smart meters and 1,230,600 have been electricity smart meters.

Small energy suppliers have reported installing a total of 285,000 smart meters during the 2015 calendar year, of which, 137,500 were gas smart meters and 147,500 electricity smart meters.

Collectively, across both large and small suppliers, 1.5 million smart meters were installed in domestic properties during 2015. Figure 1 shows the installation activity by suppliers over the course of the Programme.

As the figure shows, more electricity smart meters are installed every quarter compared to gas smart meters – this is due to some properties having only electricity supplied and also some energy suppliers choosing to carry out electricity only installations at present.

Figure 1: Quarterly installation activity for large energy suppliers and overall installation activity during 2015 for large and small energy suppliers



2.2 Operational meters in domestic properties

As of 31 December 2015, there were a total of 22.6 million gas meters and 27.5 million electricity meters operated by both large and small energy suppliers in domestic properties in Great Britain.

Table 1 below shows the number of meters operated by the large and small suppliers by different meter types, across all domestic properties in Great Britain. Note, only smart meters count towards the roll-out figures reported under this Programme.

Table 1: Meters operating as at 31 December 2015

Meters operating as at 31 December 2015	Domestic Gas and Electricity		
	Smart Meters	Smart-Type Meters	Traditional Meters
Large suppliers	1,881,900	767,000	44,848,400
Small suppliers (1)	437,700	102,100	2,099,300

(1) Of the 38 eligible small suppliers, 32 data returns were of high quality, a further 2 of good quality and the remaining 4, of moderate quality. The above data reflects data from all 38 returns. See accompanying Methodology Note for further details on data quality definitions.

Figures reported to the nearest 100.

The number of smart meters in operation is defined as the number of smart meters that energy suppliers are operating in smart mode at 31 December 2015.

As expected, large energy suppliers have seen a steady increase in the number of smart meters in operation from quarter to quarter (see Table 2a in accompanying tables: <https://www.gov.uk/government/collections/smart-meters-statistics>) and as at 31 December 2015 there were 1.88 million meters operating in smart mode.

In comparison, there were 0.44 million smart meters operated in smart mode by the small suppliers (note, this is the first time small supplier statistics have been published, hence no historical data is available for them).

Overall, this represents 4.6 per cent of all domestic meters operated by large and small suppliers.

The number of smart meters operating in smart mode at the end of quarter four 2015 (2,319,600) is less than the total number of smart meters installed to date (2,351,000⁴). A key reason behind this discrepancy may be technical issues such as, meters being unable to communicate externally via the wide area network or customers choosing to switch to suppliers currently unable to operate smart meters in smart mode. In both cases, the meters will be operated in traditional mode.

⁴ Note this figure does not include pre 2015 smart meter installations carried out by small energy suppliers, due to non-availability of complete data.

Chapter 3: Non-domestic Smart Metering

This chapter reports on the latest number of smart and advanced meters installed in smaller non-domestic sites during the final quarter of 2015 by large energy suppliers; and during the full 2015 calendar year, by small energy suppliers. The number of smart and advanced meters operated in non-domestic sites as at 31 December 2015 is also reported for both large and small suppliers.

Detailed breakdowns on installation and operating figures can be found in the accompanying tables to this report, available at:

<https://www.gov.uk/government/collections/smart-meters-statistics>

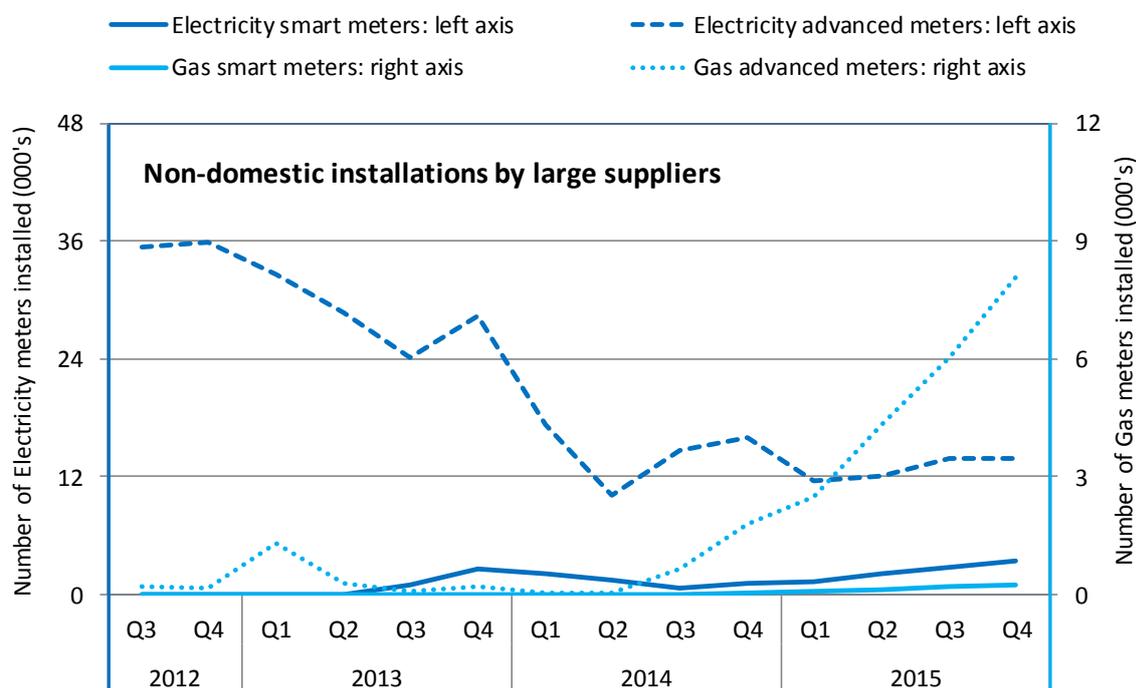
3.1 Installations in smaller non-domestic sites

In the final quarter of 2015, there were 25,500 smart and advanced meters installed in smaller non-domestic sites by large energy suppliers (of which 21,900 were advanced meters and the rest smart meters). This is a 12 percent increase compared to quarter three 2015.

As seen in Figure 2, the number of non-domestic smart and advanced meter installations across the quarters has fluctuated. This is primarily a result of energy suppliers utilising the Foundation Stage to plan their own installation strategies and refining their reporting methods and back-end systems to provide more accurate information on their non-domestic meter portfolio.

Among large suppliers, advanced meters still comprise the majority of electricity meter installations in the non-domestic sector, with every one in four electricity meter installations being a smart meter. Furthermore, around 3 per cent of all gas meter installations in smaller non-domestic sites are gas smart meters.

Figure 2: Number of smart and advanced meters installed by large energy suppliers in smaller non-domestic sites, by fuel type and quarter



Note, the above chart excludes historic data which can be found in the accompanying excel tables 3a, 3b and 3c.

To date (up to 31 December 2015) an estimated total of 669,700 smart and advanced meters have been installed in smaller non-domestic sites by large energy suppliers (650,300 advanced meters and 19,400 smart meters). These meters count towards energy suppliers' roll-out obligations.

Small energy suppliers reported installing a total of 61,600 smart and advanced meters during the calendar year 2015, of which, around 200 were smart meters and 61,300 advanced.

3.2 Operational meters in smaller non-domestic sites

As of 31 December 2015, there were a total of 2.6 million meters operated by large energy suppliers in smaller non-domestic sites in Great Britain. 2.1 million of these meters are electricity meters and 0.5 million are gas meters.

The total number of meters in operation in smaller non-domestic sites is seen to fluctuate between quarters. This occurs for a variety of reasons: for example, meter installations in new buildings, building demolitions and customers switching to and from small energy suppliers who do not operate smart meters in smart mode.

The total number of smart and advanced meters in operation is defined as the number of smart and advanced meters which energy suppliers are operating in smart mode, or with advanced functionality, at the end of each quarter.

At 31 December 2015, there were 525,900 (37,400 gas and 488,600 electricity) non-domestic smart and advanced meters operating in smart mode or with advanced functionality by large energy suppliers. This represents one in five of all non-domestic meters operated by large energy suppliers.

Small suppliers reported 285,000 smart and advanced meters operating in smart mode or with advanced functionality as at 31 December 2015.

Overall, this represents 24 per cent of all non-domestic meters operated by large and small suppliers in Great Britain.

Annex A: Data and processing

Energy Suppliers

The table below lists the energy suppliers included in the analysis for this report. Please note, all 38 small energy suppliers with a valid data return have been included in this list, including those with nil returns for smart meter installations (that is, inclusion in the report does not imply the energy supplier is necessarily rolling out smart meters).

Large Energy Suppliers:

- British Gas
- E.ON
- EDF Energy
- First Utility
- Npower
- Ovo Energy
- Scottish Power
- SSE
- Utility Warehouse

Small Energy suppliers

- Axis for Business
- Better Energy
- Bulb
- Business Energy Solutions
- Contract Natural Gas
- Co-operative Energy
- Corona Energy
- Crown Gas and Power
- D-Energi
- Dong Energy
- Dual Energy
- Economy Energy
- Economy Gas
- Ecotricity
- E-Energy
- Extra Energy
- Flow Energy
- Gaz Prom
- GB Energy Supply

- GDF Suez Energy
- Gnergy
- Go Effortless Energy
- Good Energy
- Green Energy
- Green Star Energy
- Haven Power
- Hudson Energy
- iSupply Energy
- LoCO2 Energy
- Opus Energy
- Regent Gas
- Robin Hood Energy
- Smartest Energy
- Spark Energy
- TEG
- Total Gas and Power
- Utilita
- Zog Energy

Experimental Statistics

These data are released as Experimental National Statistics, this means they are new statistics and have not undergone the full evaluation process that is required for 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.

More information on the methodology is included in the accompanying Methodology note:

<https://www.gov.uk/government/collections/smart-meters-statistics>

As with any new data collection, there are likely to be some data quality issues to resolve as the process beds in. Therefore, data in the quarterly reports should be treated as provisional and subject to revision.

Any revisions will be marked in the data tables and for any significant revisions we will provide an explanation of the main reasons.

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