Department for Business, Energy & Industrial Strategy

Smart Meter Statistics in Great Britain: Quarterly Report to end September 2019

28th November 2019 **Official Statistics**

As at 30 September 2019 there were **15.6 million** smart and advanced meters operating in homes and businesses across Great Britain

This is an increase of **4.1%** from the previous quarter

28% of domestic meters are now smart meters operating in smart mode

1,068,600 domestic installations were carried out by large suppliers in Q3 2019, **5.9%** more than in Q2

38% of non-domestic meters are now operating in smart mode or with advanced functionality

20,800 non-domestic installations by large suppliers in Q3 2019, **6.4%** fewer than in Q2

What you need to know about these statistics:
This quarterly release includes information on the number of smart meters installed in domestic properties and smaller non-domestic sites during the third quarter of 2019 by the 14 largest energy suppliers, as well as the total number of meters operated by these suppliers on 30 September 2019.

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Next publication: 12th March 2020

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Introduction

This quarterly release presents statistics on the roll-out of smart meters in Great Britain. It reports the number of smart meters installed in domestic properties and smaller non-domestic sites during the third quarter of 2019 by the 14 large energy suppliers (see Definitions section for more details). It also includes the total number of meters operated by these suppliers on 30 September 2019. Information on meters operated by small suppliers at the end of 2018 is also included.

The replacement of traditional gas and electricity meters with smart meters is an essential national energy infrastructure upgrade for Great Britain that will help make our energy system cheaper, more efficient and reliable. The Government is committed[1] to ensuring that every home and small business in the country is offered a smart meter by the end of 2020.

Smart meters are the next generation of gas and electricity meters and offer a range of intelligent functions. For example, they can tell customers how much energy they are using in pounds and pence through an In-Home Display (IHD). This information will help customers manage their energy use, save money and reduce emissions. Smart meters communicate directly with energy suppliers, meaning customers will get accurate bills.

The successful delivery of smart metering benefits depends upon coordinated effort from a wide range of organisations. The Smart Metering Implementation Programme is led by the Department for Business, Energy and Industrial Strategy (BEIS), regulated by the Office of Gas and Electricity Markets (Ofgem), and delivered by energy suppliers. The majority of meter installations to date have been first generation smart meters (SMETS1). They have provided energy suppliers with valuable experience and are helping consumers save energy and money. The market is now transitioning to installing second generation smart meters (SMETS2).

Ahead of the national smart metering communications infrastructure being in place, the Government defined a standard, known as SMETS1, to ensure minimum common functionality and to stop the variability in the smart-type meters which some energy suppliers were already installing at that time. This was important to ensure a consistent consumer experience and for these meters to be later enrolled into the communications infrastructure and made interoperable between all energy suppliers.

The national data and communications infrastructure, run by the Data and Communications Company (DCC) across GB, enables energy suppliers to install and operate second generation smart meters (SMETS2 meters). The upgrade to the national smart metering network to support the enrolment of first-generation smart meters has started and will be completed by the end of 2020.

The next quarterly publication is planned for publication on 12 March 2020.

[1] https://www.gov.uk/guidance/smart-meters-how-they-work

Meters in operation

In the data tables accompanying this publication, Table 1 shows domestic meters operated by large suppliers, Table 3 shows non-domestic meters operated by large suppliers and Table 5 shows annual data on meters in operation, for both large and small suppliers. All tables also show the split by fuel and meter type.

As at 30 September 2019 there were **15.6 million** smart meters operating in smart mode and advanced meters in homes and businesses in Great Britain, operated by both large and small energy suppliers. This is a **4.1%** increase from the previous quarter. See Table 5 in the accompanying tables to this report for a full breakdown of how this figure is calculated, with Table 1 below providing a summary.

Table 1: 15.6 million smart and advanced meters are operating at end Q3 2019

Great Britain, to end Q3 2019

	Large Suppliers (end Q3 2019)	Small Suppliers (end Q4 2018)	Total
Total domestic smart meters	14,013,339	352,848	14,366,187
Total non-domestic smart and advanced meters	748,749	437,957	1,186,706
Total	14,762,088	790,805	**15,552,893**

Source: Energy Suppliers reporting to BEIS

Meters operating in smart mode are sending energy consumption readings directly to suppliers. Data from suppliers indicates that 3.1 million smart meters were known to be operating in traditional mode as at end 30th September 2019. Smart meters can temporarily operate in traditional mode for a number of reasons including:

- customers switching to suppliers currently unable to operate the meter in smart mode,
- meters being unable to communicate via the wide area network at the point of reporting,
- customers having their meter installed in traditional mode,
- installed meters yet to be commissioned (e.g. in new build premises).

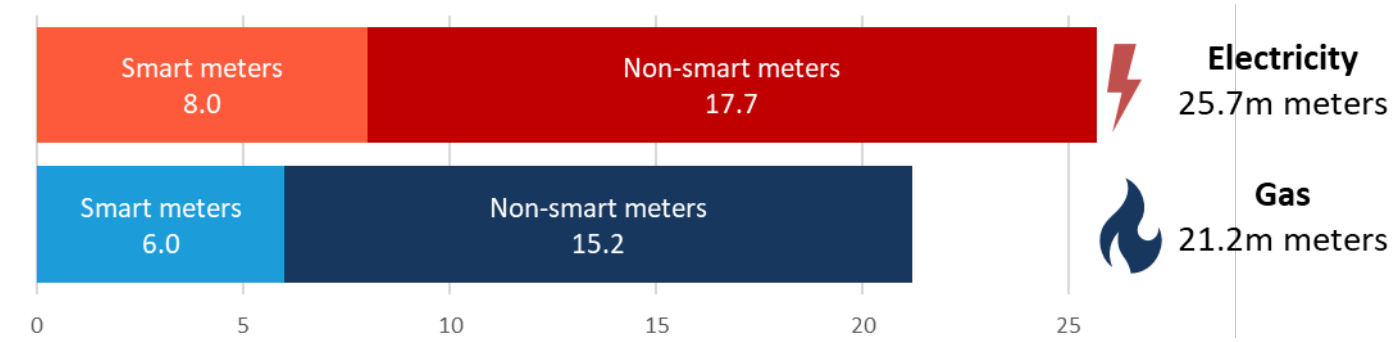
Operational meters in domestic properties

As of 30 September 2019, there were a total of 21.2 million gas meters and 25.7 million electricity meters operated by large energy suppliers in domestic properties across Great Britain. Figure 1 overleaf shows the breakdown of all large supplier-operated meters by different meter and fuel types. At the end of September 2019, 30% of all domestic meters operated by large energy suppliers were smart (28% for gas and 31% for electricity).

The number of smart meters operating continues to rise, as shown in Figure 2, with a 4.1% increase from the previous quarter. The latest figures show that 14.0 million domestic smart meters in smart mode are operated by large suppliers, 57% of which are electricity meters.

Figure 1: Thirty percent of domestic meters are smart

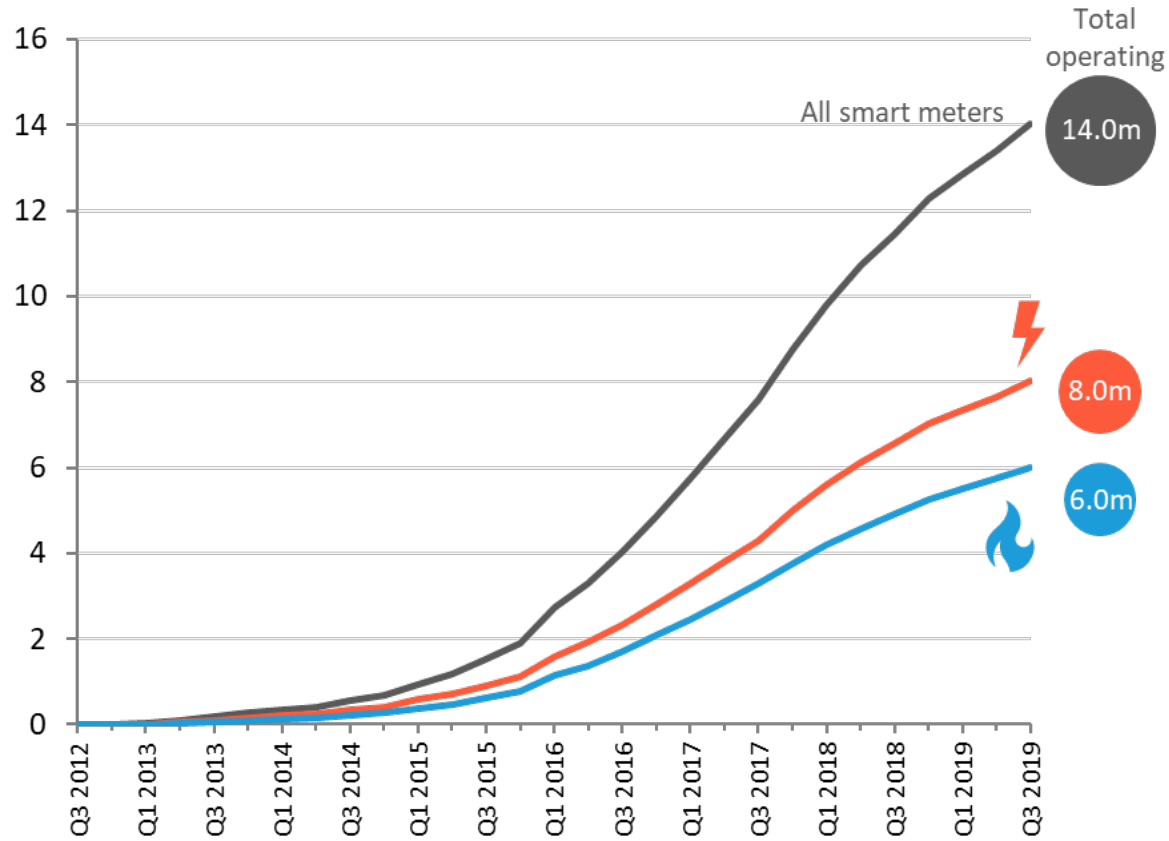
Great Britain, domestic meters operated by large energy suppliers
Q3 2019, millions



Source: Energy Suppliers reporting to BEIS.

Figure 2: Smart meters in operation continue to increase

Great Britain, domestic smart meters operated by large suppliers
Q3 2012 to Q3 2019, millions



Source: Energy Suppliers reporting to BEIS.

A smaller proportion of small energy suppliers' meters are smart, compared to large suppliers. At the end of 2018 they reported operating a total of 353,000 smart meters, which is 9.4% of their meters, compared to 29% for large suppliers. Collectively across both large and small energy suppliers there were 14.4 million smart meters operating in domestic properties in Great Britain as at 30 September 2019, representing 28% of all domestic meters.

Industry information from the Data Communications Company (DCC) show that as of 30 September 2019, there were nearly 2.3 million domestic SMETS2 meters connected to the system. This has increased from 1.3 million at the end of June 2019.

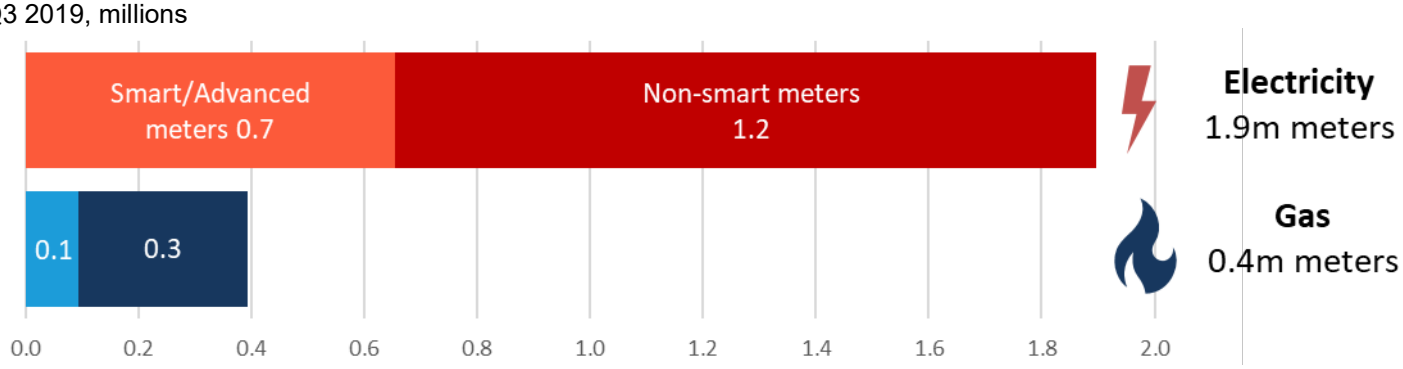
Operational meters in smaller non-domestic sites

As of the end of September 2019, there were 748,700 smart meters operating in smart mode, or advanced meters representing a third of all non-domestic meters in operation by large suppliers, see Figure 3. A greater proportion of electricity meters are smart or advanced than gas (35% versus 24%).

Figure 3: A third of non-domestic meters are smart or advanced

Great Britain, non-domestic meters operated by large energy suppliers

Q3 2019, millions



Source: Energy Suppliers reporting to BEIS.

Small energy suppliers reported operating a total of 438,000 smart and advanced meters operating with smart or with advanced mode functionality in smaller non-domestic sites as at the end of 2018. Collectively, both large and small energy suppliers were operating 1.19 million smart and advanced meters across smaller non-domestic sites in Great Britain; 38% of their total meters.

Meters installed

In the data tables accompanying this publication, Table 2 shows a quarterly breakdown of domestic meters installed by large suppliers, Table 4 shows the non-domestic installations by large suppliers and Table 6 gives the annual installation data for both large and small suppliers. All tables show the split by fuel and meter type.

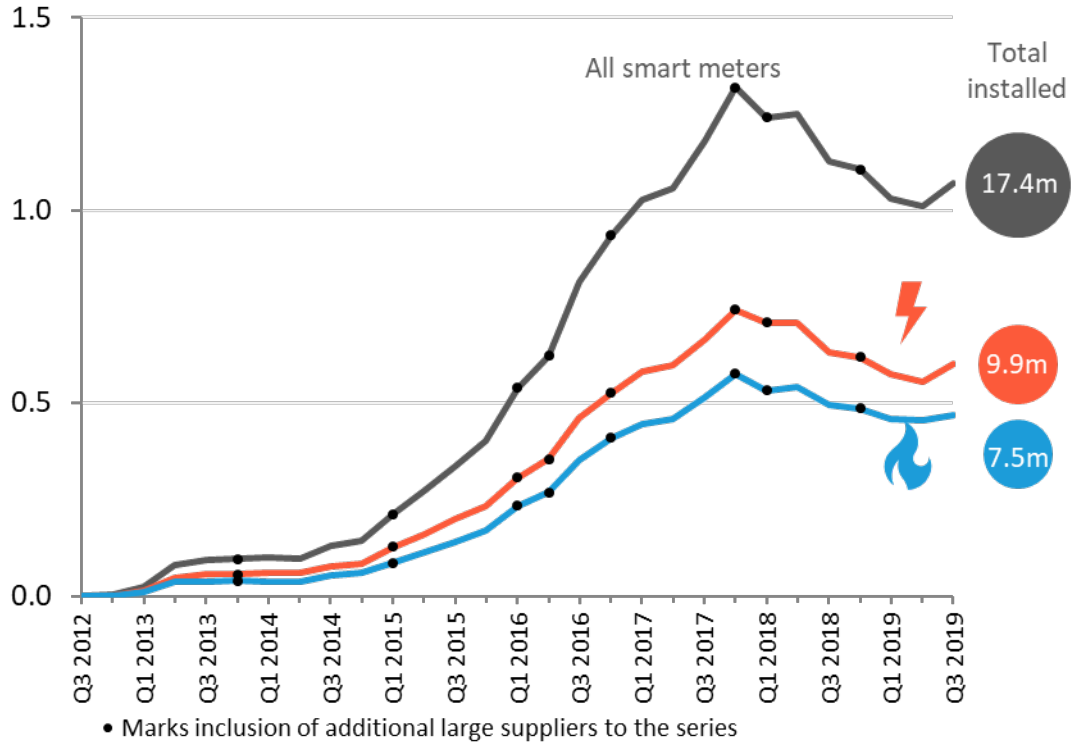
Meters installed in domestic properties

In the third quarter of 2019, **1.07 million** smart meters were installed by large energy suppliers. This represents a **5.9%** increase in smart meter installations compared to the previous quarter, driven by an increase in electricity installations of **8.2%**. Gas installations also increased, though by **3.1%** compared to Q2 2019. Compared to the same quarter last year, installation activity by large energy suppliers is 5.3% lower.[2]

Figure 4: Installation numbers increased in Q3 2019

Great Britain, domestic meters installed by large suppliers

Q3 2012 to Q3 2019, millions



Source: Energy Suppliers reporting to BEIS.

This was the eleventh consecutive quarter with over a million smart meters installed. Figure 4 shows quarterly installation activity by large energy suppliers over the course of the Smart Metering Implementation Programme.

[2] There have been two large supplier transitions since the same period last year; one large supplier entering and one exiting. See Technical Information section for further details.

Meters installed in smaller non-domestic properties

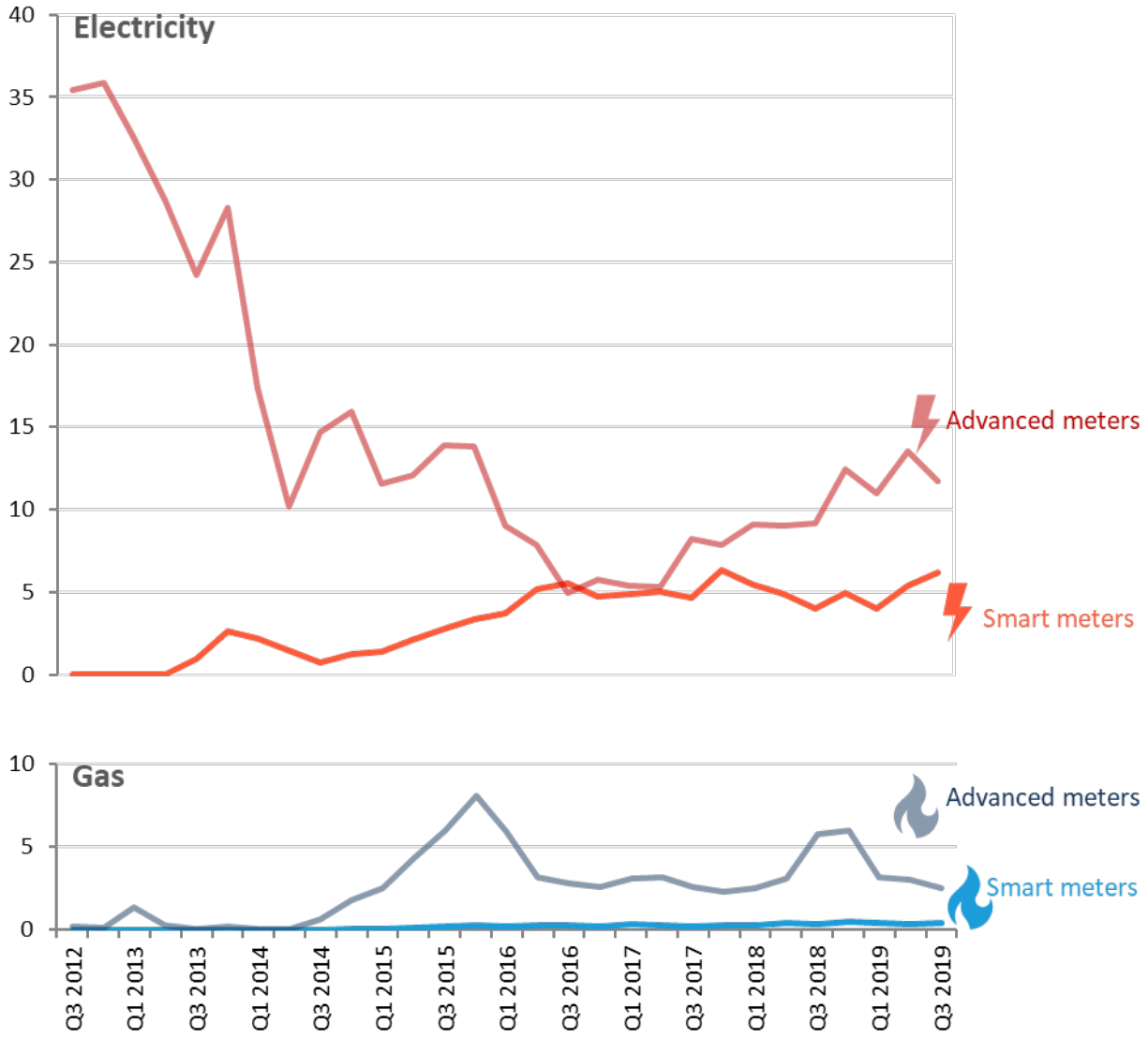
In the third quarter of 2019, there were **20,800** smart and advanced meters installed in smaller non-domestic sites by large energy suppliers (of which 14,200 were advanced meters and the rest smart meters). This represents a **6.4%** decrease overall from the previous quarter, though an increase of **16%** for smart meters, where the Q3 2019 smart total is the second highest in the time series. However, Figure 5 demonstrates that there is no consistent pattern to the quarterly installation numbers in non-domestic properties.

As of the end of September 2019 an estimated 1.2 million smart and advanced meters had been installed in smaller non-domestic sites by both large and small energy suppliers in Great Britain. Of these meters, 931,600 (77%) were installed by large energy suppliers.

Figure 5: Installation numbers for non-domestic meters continue to be variable

Great Britain, non-domestic meters installed by large suppliers

Q3 2012 to Q3 2019, thousands



Source: Energy Suppliers reporting to BEIS.

Accompanying tables

The following tables are available in Excel format on the department's statistics website https://www.gov.uk/government/collections/smart-meters-statistics:

Quarterly – Large Supplier Data

1 Domestic meters operated by large energy suppliers
2 Domestic smart meters installed by large energy suppliers
3 Non-domestic meters operated by large energy suppliers
4 Non-domestic smart and advanced meters installed by large energy suppliers

Annual – Large and Small Supplier Data

5 Meters operated by large and small energy suppliers
6 Smart and advanced meters installed by large and small energy suppliers

Technical information

Energy suppliers report data quarterly for large suppliers and annually for small suppliers. This data is received by BEIS one month after the end of each reporting period. It undergoes quality assurance before being combined to provide an industry-level estimate, protecting commercial sensitivity. The data used in this report includes the number of meters installed in a given period, while the number of meters in operation is calculated at the end point.

The first statistical report on the Smart Meter roll-out reported on Q2 2013 for large energy suppliers. Subsequent reports are published on a quarterly basis. Annual small supplier data were published alongside large supplier data for the first time for Q4 2015. Prior to this, data received from many of the small suppliers did not meet the quality standards required for publication. The quality of the data returns from energy suppliers are described as:

- High quality: error free returns;
- Good quality: minor errors but data still included;
- Poor quality: not provided therefore portfolio positions were imputed from the most recent submission or other reliable intelligence.

Of the 72 eligible small suppliers captured in 2018, 63 returned data of high quality, a further four were of good quality and the remaining five were of poor quality.

The following transitions from small to large suppliers have occurred in this publication series:

- Utility Warehouse - incorporated Q4 2013
- First Utility (now Shell Energy) - incorporated Q1 2015
- OVO - incorporated Q1 2015
- Utilita - incorporated Q1 2016
- Extra Energy - incorporated Q2 2016; removed Q4 2017
- Co-operative Energy - incorporated Q4 2016
- Economy Energy - incorporated Q4 2017; removed Q1 2019
- Hudson Green Star - incorporated Q4 2017
- Bulb - incorporated Q1 2018
- Octopus - incorporated Q4 2018

Up until Q1 2016, meters installed under the mandate by energy suppliers before they transitioned to large suppliers were included within the historic installation estimates for large suppliers. This ensured that reported totals installed to date by large energy suppliers were as accurate as possible. Following the introduction of small supplier statistics in Q4 2015, this was no longer needed. Historic installation totals for transitioning suppliers remain in the small supplier totals reported on at the end of the previous calendar year.

Energy Suppliers included in this report

The table below lists the energy suppliers included in the analysis for this report.

14 Large Energy Suppliers:

British Gas	Hudson Green Star	Scottish Power
Bulb	Npower	SSE
Co-operative Energy	Octopus Energy	Utilita
E.ON	OVO	Utility Warehouse
EDF Energy	Shell Energy	

72 Small Energy suppliers as at 31 December 2018:

Ampower	ESB Energy	Regent Gas
Avanti Gas	Eversmart Energy	Robin Hood Energy
Avid Energy	Foxglove Energy	Simplicity Energy
Avro Energy	Gazprom Energy	SmartestEnergy
Axis	GnERGY	So Energy
BES Utilities	Go Effortless Energy	Solarplicity
Better Energy	Good Energy	Squeaky Energy
BPG Energy	Green Energy	Symbio Energy
Breeze Energy	Green Network Energy	Together Energy
Brilliant Energy Supply	Gulf Gas and Power	Tonik Energy
Bristol Energy	Haven Power	Total Gas & Power
Brook Green Supply	Igloo Energy	Toto Energy
Bryt Energy	iSupply Energy	Tru Energy
CNG	Logicor	URE Energy
Corona Energy	MA Energy	Utility Point
Crown Gas and Power	Marble Power	Vayu (now Naturgy)
D-ENERGi	MB Energy	Verastar
Daisy Energy Supply	Nabuh Energy	Xcel Energy
Dual Energy	Opal Gas	Yorkshire Gas and Power
E	Opus Energy	Yu Energy
Ecotricity	Orbit Energy	Zebra Power
ElectroRoute	Orsted	Zog Energy
ENGIE	People’s Energy	
Enstroga	PFP Energy	
Entice Energy	Pure Planet	

Definitions

Advanced meters	Advanced meters must, at minimum, be able to store half-hourly electricity and hourly gas data, to which the non-domestic customer has timely access and the supplier has remote access
DCC	Data and Communications Company (DCC) - the holder of the Smart Meter communication licence, Smart DCC Ltd. The DCC Licence was awarded under section 7AB of the Gas Act 1986, and section 5 of the Electricity Act, each allowing Smart DCC Ltd to undertake the activity of providing a Smart Meter communication service.
Domestic properties	Properties where the customer is supplied with electricity or gas, wholly or mainly for domestic purposes
IHD	In-Home Display (IHD) - an electronic device paired to the Smart Metering System, which provides near real-time information on a consumer's energy consumption
Large energy suppliers	Supply either 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 and no electricity customers is a large energy supplier).
Non-Smart meters	All meters which are not 'smart meters operating in smart mode'
Ofgem	Office of Gas and Electricity Markets (Ofgem) - the Government regulator for the electricity and downstream natural gas markets in Great Britain
Small energy suppliers	Supply both gas and electricity to less than 250,000 domestic customers; they may supply domestic or non-domestic sites
Smaller non-domestic sites	Business or public sector customers whose sites use low to medium amounts of electricity (Balancing and Settlement Code Profile Classes 1, 2, 3 or 4) or gas (using less than 732MWh of gas per annum)
Smart meter	Compliant with the Smart Meter Equipment Technical Specification (SMETS) and has functionality such as being able to transmit meter readings to energy suppliers and receive data remotely
SMETS1	Smart Metering Equipment Technical Specification version 1 (SMETS1) - the first version of the Smart Metering Equipment Technical Specification which was designated by the Secretary of State
SMETS2	Smart Metering Equipment Technical Specification version 2 (SMETS2) - the second version of the Smart Metering Equipment Technical Specification which was designated by the Secretary of State

Further information

Future updates to these statistics

The next quarterly publication is planned for publication on 12 March 2020. The content and format of the quarterly smart meters statistical report is open to review and will seek to include more relevant information as it becomes available. The format and context may be subject to change in future versions.

Related statistics

Further information on energy statistics is available at:
https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics

The figures within this publication series represent a large sub-set of meters found in other Departmental consumption statistics.

Sub-national gas and electricity consumption statistics

This publication provides estimates of annual electricity and gas consumption below national level. Latest estimates are for 2017 covering UK and include a number of developments to improve the quality and value of the estimates for users.
https://www.gov.uk/government/statistics/sub-national-electricity-and-gas-consumption-summary-report-2017

Digest of UK Energy Statistics (DUKES)

DUKES contains annual data on production and consumption of overall energy and of the individual fuels in the United Kingdom. Also includes a commentary covering all the major aspects of energy and gives a comprehensive picture of energy production and use over the last five years with key series back to 1970.
www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

National Energy Efficiency Data-Framework (NEED)

The National Energy Efficiency Data-Framework (NEED) was set up to provide a better understanding of energy use and energy efficiency in domestic and non-domestic buildings in Great Britain. The data framework matches gas and electricity consumption data, collected for BEIS sub-national energy consumption statistics, with information on energy efficiency measures installed in homes, from the Homes Energy Efficiency Database (HEED), Green Deal, the Energy Company Obligation (ECO) and the Feed-in Tariff (FIT) scheme. It also includes data about property attributes and household characteristics, obtained from a range of sources.
https://www.gov.uk/government/collections/national-energy-efficiency-data-need-framework

Revisions policy

The BEIS statistical revisions policy sets out the revisions policy for these statistics, which has been developed in accordance with the UK Statistics Authority Code of Practice for Statistics.

Uses of these statistics

The data associated with this release is used in internal analysis to help form policy decisions and is also used by industry to monitor trends in the roll-out. The data within and associated with this publication are also used to answer Parliamentary questions and Freedom of Information requests.

User engagement

Users are encouraged to provide comments and feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed and should be sent to: smartmeter.stats@beis.gov.uk

The BEIS statement on statistical public engagement and data standards sets out the department's commitments on public engagement and data standards as outlined by the Code of Practice for Statistics.

Pre-release access to statistics

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the BEIS statement of compliance with the Pre-Release Access to Official Statistics Order 2008.

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This publication is available from: https://www.gov.uk/government/collections/smart-meters-statistics

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