



Smart Meter Statistics in Great Britain: Quarterly Report to end September 2021

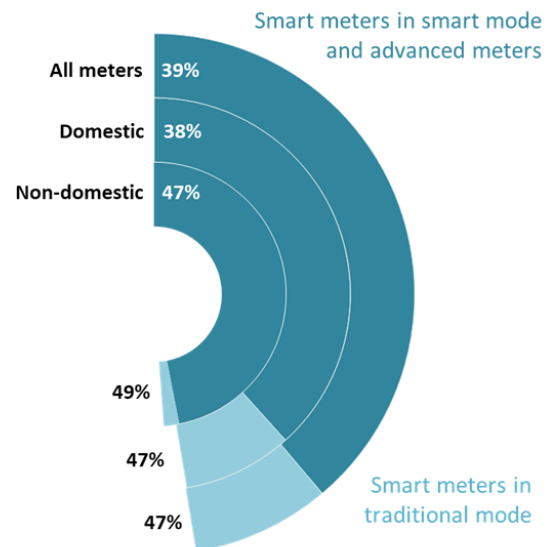
25 November 2021

Official Statistics

This report includes an update from all large suppliers in the energy market in Great Britain at end of Q3 2021, with data from small suppliers up to end 2020

As of 30 September 2021, there were **26.4 million** smart and advanced meters in homes and small businesses in Great Britain, of which **21.6 million** were smart in smart mode or advanced meters

47% of all meters are smart or advanced meters; a **two** percentage point increase from the previous quarter



In Q3 2021 large suppliers installed:



Domestic

877,000 smart meters
102,800 less than Q2 2021



Non-domestic

31,000 smart/advanced meters
2,000 less than Q2 2021

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 2021 by the 14 large energy suppliers, as well as the total number of meters operated by large suppliers on 30 September 2021. The report also includes information for small suppliers to the end of 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 2021 by the 14 large energy suppliers, as well as the total number of meters they operated on 30 September 2021. This includes data on large suppliers who have recently exited the energy market; see [Technical Information](#) for guidance on how their activity has been captured this quarter. The publication also covers small supplier data on the number of meters installed up to the end of 2020 and operated at the end of 2020.

The replacement of traditional gas and electricity meters with smart meters is an essential national infrastructure upgrade for Great Britain that will help make our energy system cheaper, cleaner and more reliable. 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 helps customers manage their energy use, save money and reduce emissions. Smart meters communicate automatically with energy suppliers, which avoids manual meter reads and provides customers with accurate bills.

Smart meters also support the transition to a low-carbon energy system by unlocking new approaches to managing demand. Products such as smart 'time of use' tariffs incentivise consumers to save money by using energy away from peak times and enable technologies such as electric vehicles and smart appliances to be cost-effectively integrated with renewable energy sources.

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 & 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. Energy suppliers are now installing second generation smart meters (SMETS2) as the default choice.

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 network and made interoperable between all energy suppliers.

SMETS1 meters are now being moved onto the national communications network, run by the Data Communications Company (DCC), so that consumers regain and keep smart services if they switch supplier. Meters are being enrolled remotely, without consumers needing to take any action, and priority is being given to those which have temporarily lost smart functionality. SMETS2 meters are connected to the DCC's network from the point of installation, so are already compatible between energy suppliers.

The next quarterly publication is planned for publication on 8 March 2022.

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.

At the end of September 2021, there were **26.4 million** smart and advanced meters in Great Britain in homes and small businesses.¹ Of these, **21.6 million** were smart meters operating in smart mode and advanced meters. This represents **39%** of all meters, with a further 9% of meters being smart meters in traditional mode. Therefore, a total of 47% of all meters were smart or advanced meters at the end of the quarter; an increase of two percentage points from the last quarter.² Table 1 summarises how the total smart meters in operation at the end of the third quarter of 2021 is calculated across domestic and non-domestic sectors and large and small suppliers. For a full breakdown including by fuel type, see Table 5 in the accompanying tables to this report.

Table 1: There were 21.6 million smart meters operating in smart mode and advanced meters at end of September 2021

Great Britain, to end of Q3 2021

		Large Suppliers	Small Suppliers	Total ²
Smart (smart mode) and advanced meters	Domestic meters	19,541,000	521,000	21,596,000
	Non-domestic meters	1,124,000	409,000	
Smart (traditional mode)	Domestic meters	4,146,000	570,000	4,777,000
	Non-domestic meters	51,000	10,000	
Total ²		24,863,000	1,510,000	26,373,000

Source: Energy Suppliers reporting to BEIS.

Smart meters can temporarily operate in traditional mode for several 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).

SMETS1 meters are being remotely enrolled onto the DCC's national network in order to restore smart services, and priority is being given to those which are temporarily operating in traditional mode.

Operational meters in domestic properties

As of 30 September 2021, there were a total of 22.2 million gas meters and 26.8 million electricity meters operated by large energy suppliers in domestic properties across Great Britain. Figure 1 shows detail on the breakdown of all large supplier-operated meters by different meter and fuel types.

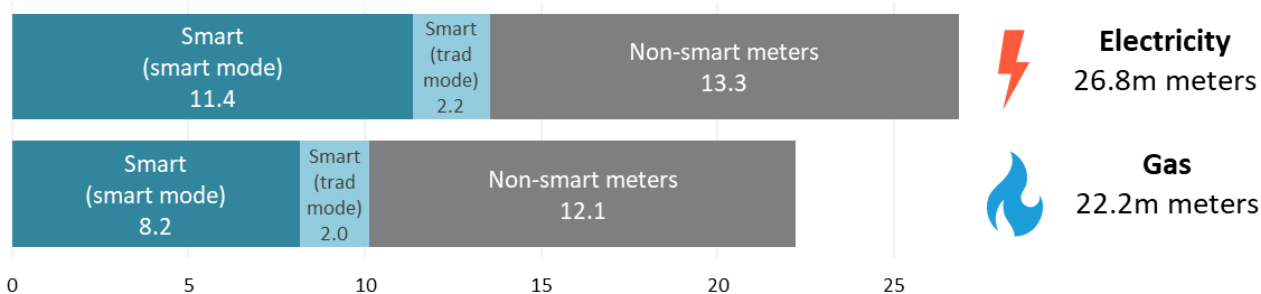
¹ This includes smart meters operated by large suppliers at the end of September 2021 and small suppliers at the end of 2020.

² Note, statistics presented are independently rounded. This means the sum of their components may differ from the totals.

Figure 1: Almost half of all domestic meters with large suppliers are now smart meters

Great Britain, domestic meters operated by large energy suppliers

Q3 2021, millions



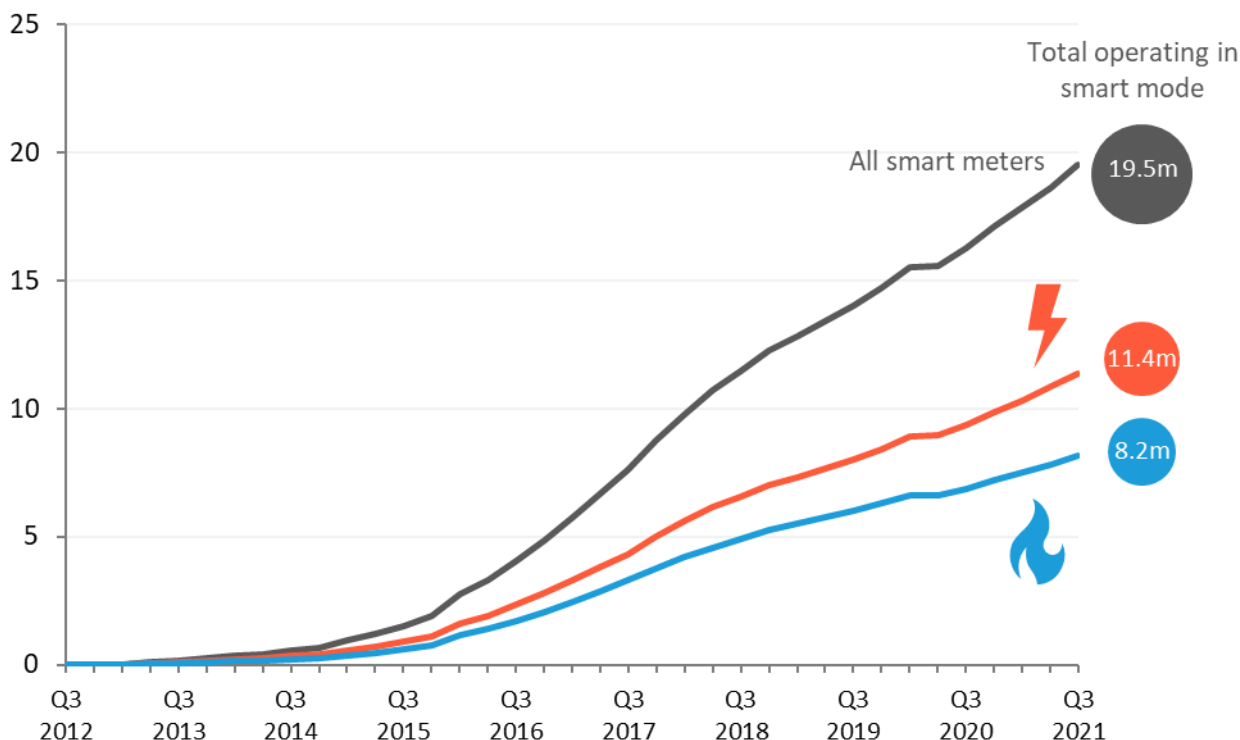
Source: Energy Suppliers reporting to BEIS.

At the end of September 2021, 40% of all domestic meters operated by large energy suppliers were smart in smart mode (37% for gas and 42% for electricity); an increase of 1.6 percentage points from the previous quarter. When including smart meters in traditional mode, this rises to 46% for gas, 50% for electricity and 48% overall. The number of smart meters operating in smart mode increased from the previous quarter by 5%, as shown in Figure 2. The latest figures show that 19.5 million domestic smart meters in smart mode are operated by large suppliers, 58% of which are electricity meters.

Figure 2: Domestic smart meters operating in smart mode continue to increase

Great Britain, domestic smart meters operated in smart mode by large suppliers

Q3 2012 to Q3 2021, millions



Source: Energy Suppliers reporting to BEIS.

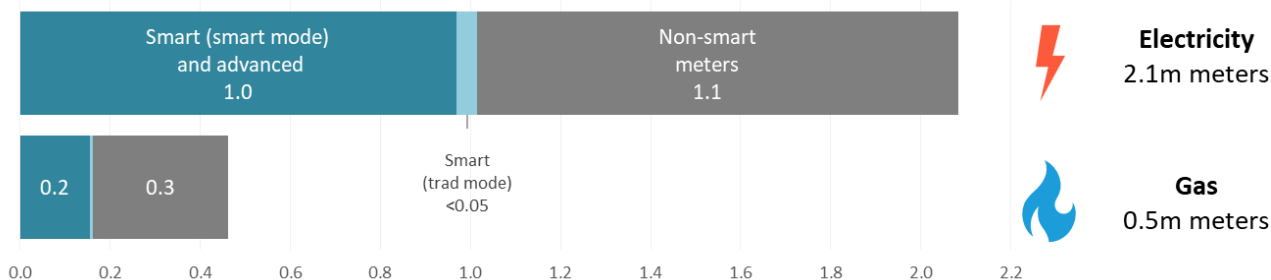
At the end of 2020, small suppliers reported operating a total of 521,500 smart meters in smart mode, with a further 570,400 in traditional mode. Collectively across all energy suppliers, there were 24.8 million domestic smart meters (including those in smart or traditional mode) in Great Britain at the end of Q3 2021; 47% of all domestic meters.

Operational meters in smaller non-domestic sites

At the end of September 2021, there were 1.1 million smart meters operating in smart mode or advanced meters representing 44% of all non-domestic meters in operation by large suppliers (Figure 3). A greater proportion of electricity meters are smart mode or advanced compared to gas meters (47% versus 33%). When including smart meters in traditional mode, these percentages are relatively unchanged since fewer non-domestic meters are smart meters in traditional mode (electricity 49%, gas 35% and overall, 46%).

Figure 3: Forty-four per cent of non-domestic meters are operating in smart mode or advanced

Great Britain, non-domestic meters operated by large energy suppliers
Q3 2021, millions



Source: Energy Suppliers reporting to BEIS.

At the end of 2020, small energy suppliers reported operating a total of 408,800 smart meters in smart mode and advanced meters in smaller non-domestic sites. An additional 9,700 were smart meters operating in traditional mode. Collectively, across both large and small energy suppliers, at the end of Q3 2021 there were 1.5 million smart meters in smart mode and advanced meters across small non-domestic sites in Great Britain; 47% of the total or 49% when including smart meters in traditional mode.

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.

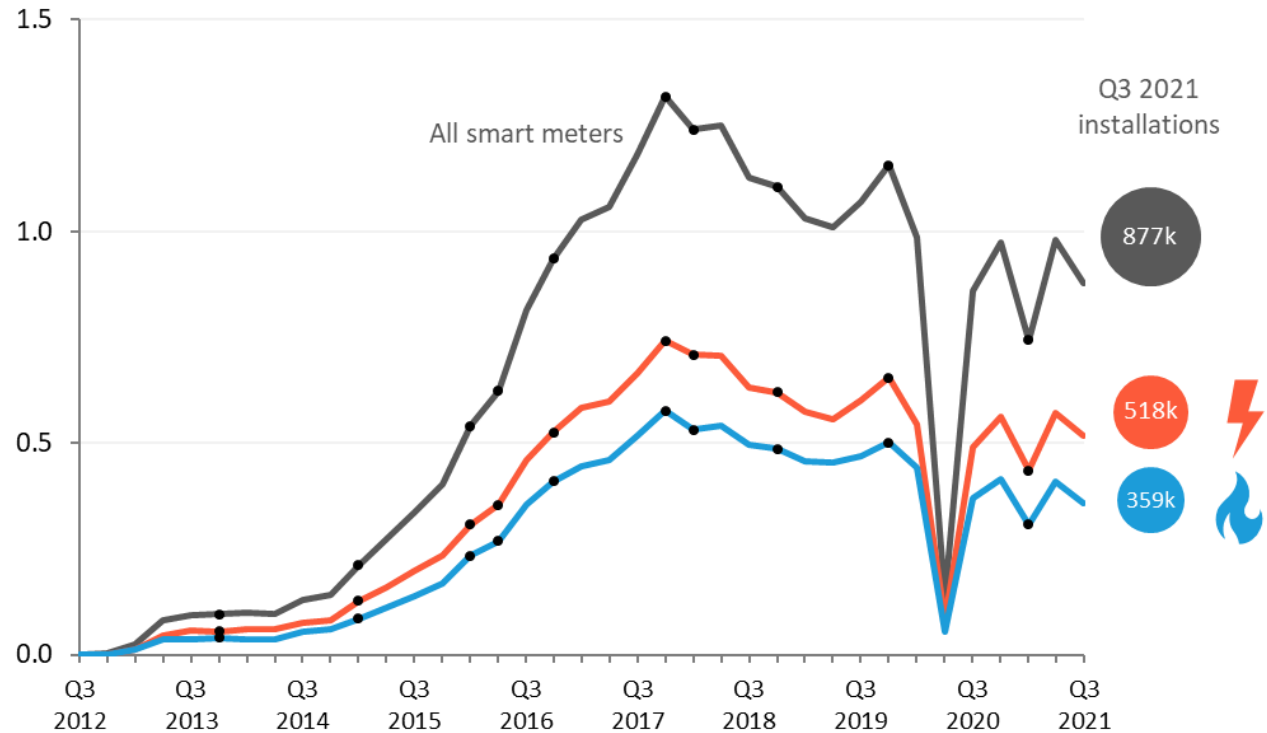
Meters installed in domestic properties

Quarterly installation activity in domestic properties by large energy suppliers over the course of the Smart Metering Implementation Programme is shown in Figure 4. In Figure 4 the low levels of installations during Q2 2020 were due to the impact of the coronavirus (COVID-19) pandemic when stay-at-home guidance was issued at the end of March 2020. Energy suppliers remobilised their smart rollouts following the publication of guidance on safe working during May 2020 while implementing additional safety measures to ensure the wellbeing of customers and staff. There have been local restrictions since then, such as in Scotland during the first half of 2021. However, since these were lifted at the end of April 2021, suppliers are now installing at scale again across Great Britain. The Q3 2021 data shows that **877,000** smart meters were installed by large energy suppliers at a level just above those seen in Q3 2020 (when energy suppliers remobilised their rollouts); although it is a 10% decrease from Q2 2021.

Figure 4: Quarterly domestic installations decreased from Q2 2021 levels

Great Britain, domestic meters installed by large suppliers

Q3 2012 to Q3 2021, millions



● Marks inclusion of additional large suppliers to the series

Source: Energy Suppliers reporting to BEIS.

Meters installed in smaller non-domestic properties

Quarterly installation activity by large energy suppliers in the non-domestic sector is shown in Figure 5. In the third quarter of 2021, there were **31,000** smart and advanced meters installed in smaller non-domestic sites by large energy suppliers. This is 6% less than were carried out during the previous quarter.

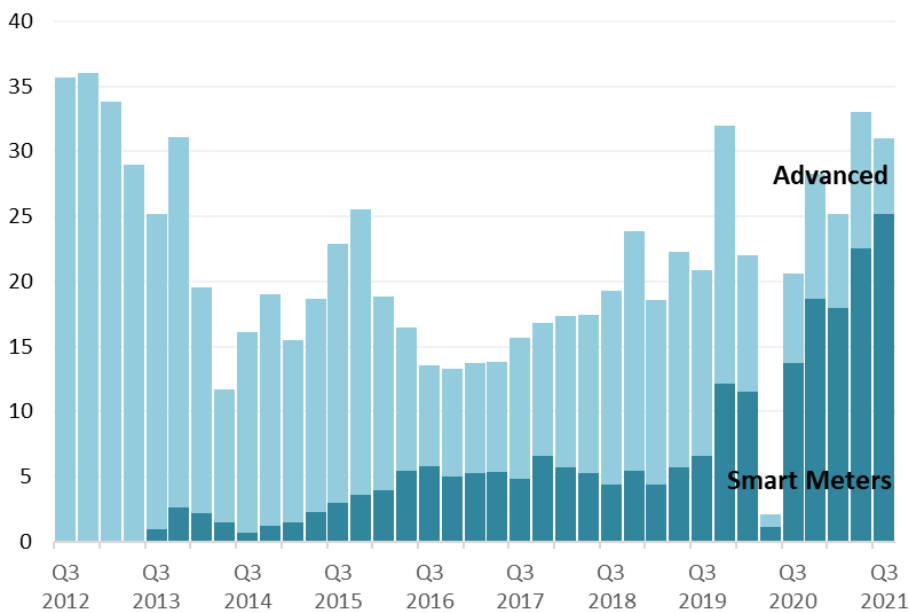
The Q2 2021 statistics in this quarter’s publication have been revised since they were published on 26 August 2021 due to corrected data being provided by a supplier; please see Table 4 of the supporting data tables. This revision slightly changes the balance of smart versus advanced meter installations in Q2, though the trend over time remains the same with an increasing proportion of installations being smart rather than advanced meters (see Figure 5).

The latest data for Q3 2021 shows that 81% of all non-domestic installations under the mandate were smart meters, an increase of 13% percentage points on the revised Q2 2021 statistics.

Figure 5: Non-domestic smart meter installs in Q3 2021 are highest on record

Great Britain, non-domestic meters installed by large suppliers

Q3 2012 to Q3 2021, thousands



Source: Energy Suppliers reporting to BEIS.

Accompanying tables

The following tables are available in two formats³ on the department's statistics website <https://www.gov.uk/government/collections/smart-meters-statistics>:

Quarterly – Large Supplier Data

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

Annual – Large and Small Supplier Data

- 5 Annual meters operated by large and small energy suppliers
- 6 Annual smart and advanced meters installed by large and small energy suppliers

³ Excel (.xlsx) and Open Document Spreadsheet (.ods)

Technical information

Large energy suppliers report data quarterly and data is reported annually by small suppliers. This means that the total meters covered in the quarterly data varies due to customers switching between large and 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 each period, while the number of meters in operation is calculated at the end point.

The first statistical report on the Smart Meter roll-out was published in 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.

Energy supplier data is cross-checked against external administrative data sources such as ElectraLink, Elexon, DCC and Xoserve. These data sources have also been used for estimation of Avro Energy and People's Energy data for the Q3 2021 report since supplier data was unavailable after they both ceased trading during the second half of September 2021. These estimates represent 4% of the total number of meters operated by large suppliers; and 2% of smart and advanced meter installations in the quarter. This update does not include small suppliers who have also recently ceased trading. The latest quarterly data from large suppliers does not include customer portfolios that have been gained from the recent small supplier market exits.

The following transitions in large supplier reporting 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; removed Q4 2019⁴
- Economy Energy - incorporated Q4 2017; removed Q1 2019
- Hudson Green Star - incorporated Q4 2017; re-branded under Shell Energy Q4 2020
- Bulb - incorporated Q1 2018
- Octopus Energy - incorporated Q4 2018
- Avro Energy - incorporated Q4 2019
- Green Network Energy - incorporated Q4 2019, removed Q1 2021
- Opus Energy - incorporated Q4 2019
- People's Energy - incorporated Q4 2020, installations included with large suppliers from Q1 2021
- npower - removed Q4 2020⁵

⁴ Co-operative Energy was bought by Octopus Energy in 2019 and their portfolio remains in the large supplier group from Q4 2019.

⁵ npower merged with E.ON in 2019, with combined reporting to BEIS for these statistics starting from Q4 2020. Their portfolio therefore remains in the large supplier group from Q4 2020.

Before 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

14 Large Energy Suppliers:

Avro Energy	Octopus Energy	Shell Energy (incl. Hudson Green Star)
British Gas	Opus Energy	SSE Energy Solutions
Bulb	OVO	Utilita
E.ON	People's Energy	Utility Warehouse
EDF Energy	Scottish Power	

66 Small Energy suppliers as at 31 December 2020:

Ampower	E	Marble Power	Social Energy
Avanti Gas	Ecotricity	Maxen Power	Symbio Energy
BES Utilities	ElectroRoute	MB Energy	Together Energy
Bluegreen Energy	ENGIE	Moneyplus Energy	Total Gas & Power
BPG Energy	Enstroga	Nabuh Energy	TruEnergy
Brook Green Supply	Entice Energy	National Gas	United Gas & Power
Bryt Energy	ESB	Neon Reef	Utility Point
CNG	Foxglove Energy	Northumbria Energy	Valda Energy
Colorado Energy	Gazprom	Omni Energy	Verastar
Corona Energy	Good Energy	Opal Gas	Xcel Energy
Crown Gas & Power	GOTO Energy	Orbit Energy	Yorkshire Gas &
D-ENERGi	Green.	Orsted	Power
Daligas	Green Energy	PFP Energy	Yu Energy
Delta Gas & Power	Gulf Gas & Power	Pozitive Energy	Zebra Power
Dual Energy (rebranded to Smartest Energy Business)	Haven Power	Pure Planet	Zog Energy
Dyce Energy	Igloo Energy	Regent Gas	
	Logicor Energy	Smartest Energy	
	MA Energy	So Energy	

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 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 or non-domestic metering points. An energy supplier need only supply 250,000 domestic or non-domestic customers a single fuel to be classed as a large energy supplier (e.g. an energy supplier supplying gas to 250,000 domestic customers and no electricity or non-domestic customers is a large energy supplier). Note that up to Q3 2019, large suppliers were defined by domestic customers only.
Non-smart meters	All meters which are not smart (or advanced for non-domestic) meters
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 either gas or electricity to less than 250,000 domestic or non-domestic metering points
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

In the future we hope to be able to use data from administrative sources for this publication. We will provide more information about this when it becomes available and would welcome feedback from users about this potential change. Please contact us at smartmeter.stats@beis.gov.uk.

Related statistics

Further information can be found on the [energy statistics](#) webpage.

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 2019 covering UK and include several developments to improve the quality and value of the estimates for users. Data for 2020 is due to be published in December 2021.

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.

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.

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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