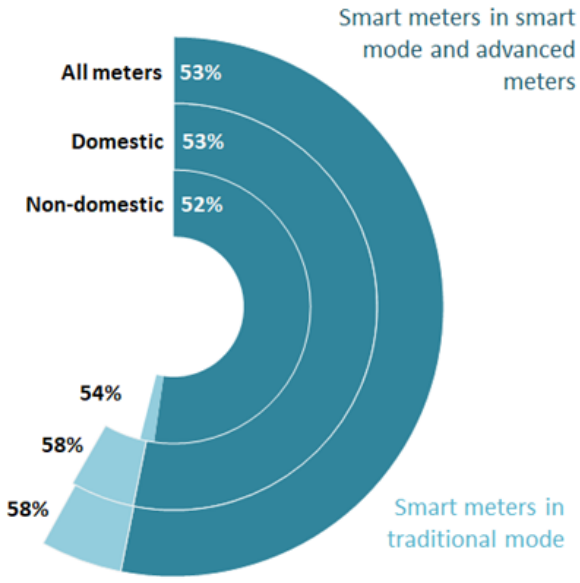
Smart Meter Statistics in Great Britain: Quarterly Report to end June 2023

31 August 2023 **Official Statistics**

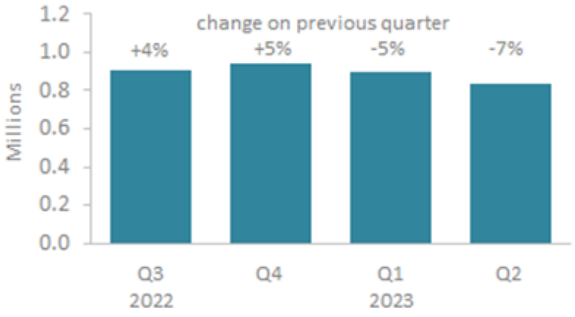
This report includes an update from all large energy suppliers in the energy market in Great Britain at the end of Q2 2023, with data from small suppliers up to end 2022

At the end of June 2023, over **33 million** smart and advanced meters were in homes and small businesses across Great Britain; **fifty-eight percent** of all meters are now smart or advanced meters, with 30.3 million operating in smart mode



During Q2 2023, a total of **834,500** smart and advanced meters were installed by large energy suppliers across Great Britain; a decrease of 7% on the previous quarter and 4% on the same quarter in 2022

Quarterly smart and advanced meter installations by large energy suppliers



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 by large energy suppliers in second quarter of 2023, as well as the total number of meters operated on 30 June 2023. The report also includes annual information for small suppliers to the end of 2022.

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Contents

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 second quarter of 2023 by large energy suppliers, as well as the total number of meters they operated on 30 June 2023. This release also includes small suppliers' installation activity during 2022 and meters operated at the end of 2022.

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 Energy Security & Net Zero, regulated by the Office of Gas and Electricity Markets (Ofgem), and delivered by energy suppliers.

In 2012, 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.

The majority of SMETS1 meters have 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 (these meters are referred to as "operating in traditional mode"). 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 30 November 2023.

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 June 2023, there were over **33 million** smart and advanced meters in Great Britain in homes and small businesses.[1] Of these, **30.3 million** were smart meters operating in smart mode or advanced meters. This now means that **53%** of all meters were smart in smart mode or advanced meters, with a further 4.9% of meters being smart meters in traditional mode.[2] In total 58% of meters operating were smart or advanced meters. Table 1 summarises how the total smart meters in operation at the end of Q2 2023 is split 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: Over 33 million smart and advanced meters were operating at end of June 2023
Great Britain, to end Q2 2023

		Large Suppliers (end Q2 2023)	Small Suppliers (end 2022)	Total [2]
Smart (smart mode) and advanced meters	Domestic meters	28,342,000	221,000	**30,301,000**
	Non-domestic meters	1,251,000	487,000	
Smart (traditional mode)	Domestic meters	2,704,000	21,000	**2,780,000**
	Non-domestic meters	43,000	11,000	
Total		32,341,000	740,000	**33,080,000**

Source: Energy Suppliers reporting to Department for Energy Security & Net Zero.

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,
- installed meters yet to be commissioned (e.g., in new build premises).

SMETS1 meters are being remotely enrolled onto the DCC's national network, this will restore smart services for meters that have lost them. As at 14 August 2023 there were 11.5 million SMETS1 meters connected to the DCC network (https://www.smartdcc.co.uk/our-smart-network/network-data-dashboard/).

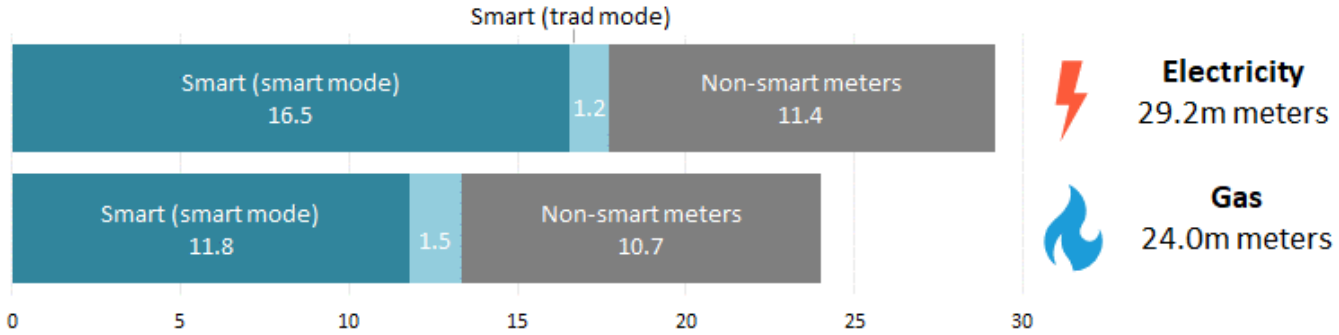
Operational meters in domestic properties

As of 30 June 2023, there were a total of 24 million gas meters and 29 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] See Technical Information section for information on how data for energy suppliers is collated.
[2] Note, statistics presented are independently rounded. This means the sum of their components may differ from the totals.

Figure 1: Over half of domestic meters were smart meters operating in smart mode

Great Britain, domestic meters operated by large energy suppliers
End Q2 2023, millions

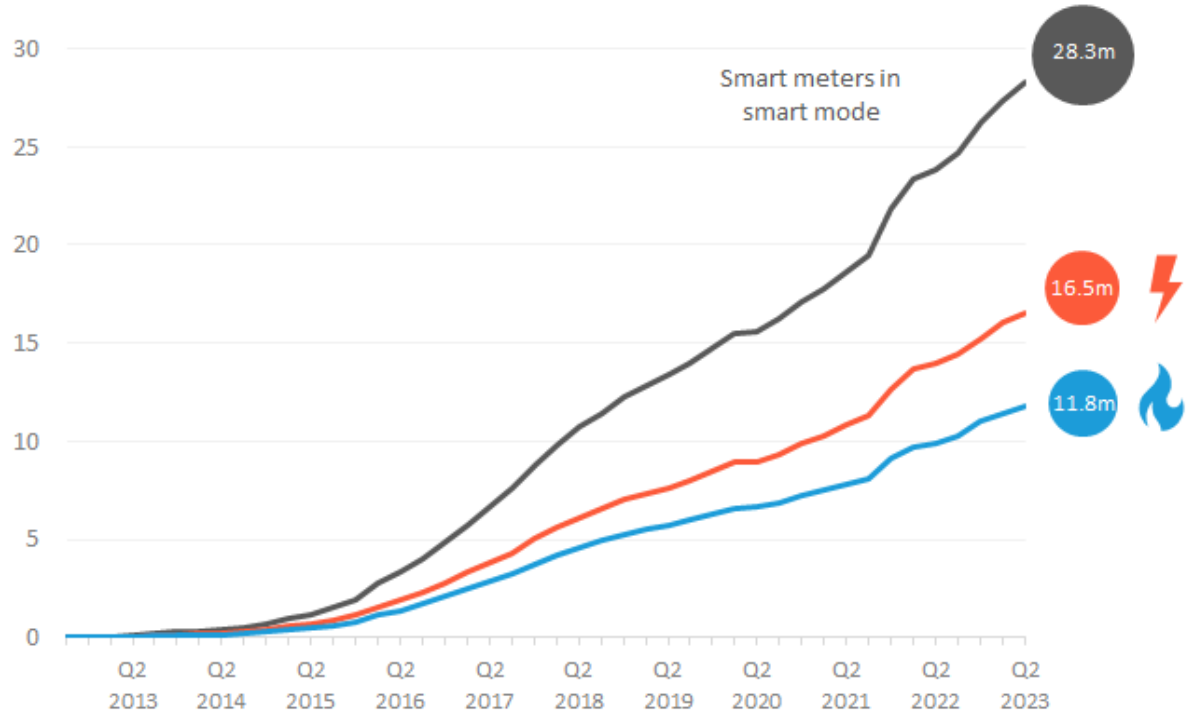


Source: Energy Suppliers reporting to Department for Energy Security & Net Zero.

At the end of June 2023, 53% of all domestic meters operated by large energy suppliers were smart in smart mode (49% for gas and 57% for electricity). When including smart meters in traditional mode, this rises to 55% for gas, 61% for electricity and 58% overall. The number of smart meters operating in smart mode increased from the previous quarter by 3.4%, as shown in Figure 2. The latest figures show that over 28 million domestic smart meters in smart mode are operated by large suppliers, 58% of which are electricity meters and consistent across the time series.

Figure 2: Domestic smart meters operating in smart mode increased to over 28 million at the end of June 2023

Great Britain, domestic smart meters operated in smart mode by large energy suppliers
end Q3 2012 to Q2 2023, millions



Source: Energy Suppliers reporting to Department for Energy Security & Net Zero.

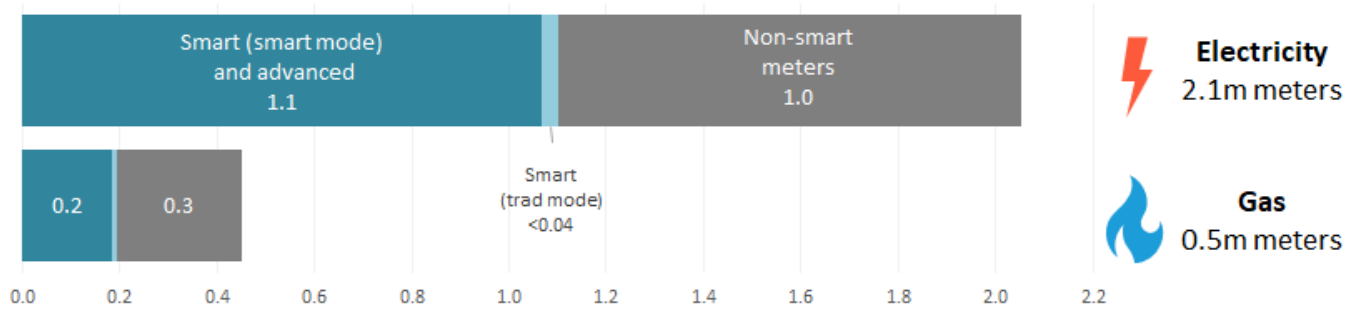
At the end of 2022, small energy suppliers operated 505,200 domestic meters (less than one per cent of all domestic meters), of which 221,100 smart meters were operating in smart mode, with a further 20,700 in traditional mode. Collectively across all energy suppliers, there were 31.3 million domestic smart meters (including those in smart or traditional mode) in Great Britain at the end of Q1 2023; 58% of all domestic meters.

Operational meters in smaller non-domestic sites

At the end of June 2023, there were 1.25 million smart meters operating in smart mode or advanced meters representing 50% of all non-domestic meters in operation by large suppliers (Figure 3). A greater proportion of electricity meters are operating in smart mode or are advanced meters compared to gas meters (52% versus 41%). When including smart meters in traditional mode, these percentages are relatively unchanged since few non-domestic meters are smart meters in traditional mode (electricity 54%, gas 43% and overall, 52%).

Figure 3: Half of all non-domestic meters are smart meters operating in smart mode or advanced meters

Great Britain, non-domestic meters operated by all large suppliers
End Q2 2023, millions



Source: Energy Suppliers reporting to Department for Energy Security & Net Zero.

At the end of 2022, small energy suppliers operated 819,200 non-domestic meters (25% of all non-domestic meters), of which 486,900 were smart meters operating in smart mode and advanced meters. An additional 11,200 were smart meters operating in traditional mode. Collectively, across both large and small energy suppliers, at the end of Q2 2023 there were 1.7 million smart meters in smart mode and advanced meters across small non-domestic sites in Great Britain; 52% of all meters in smaller non-domestic sites (54% when including smart meters in traditional mode).

Meters installed

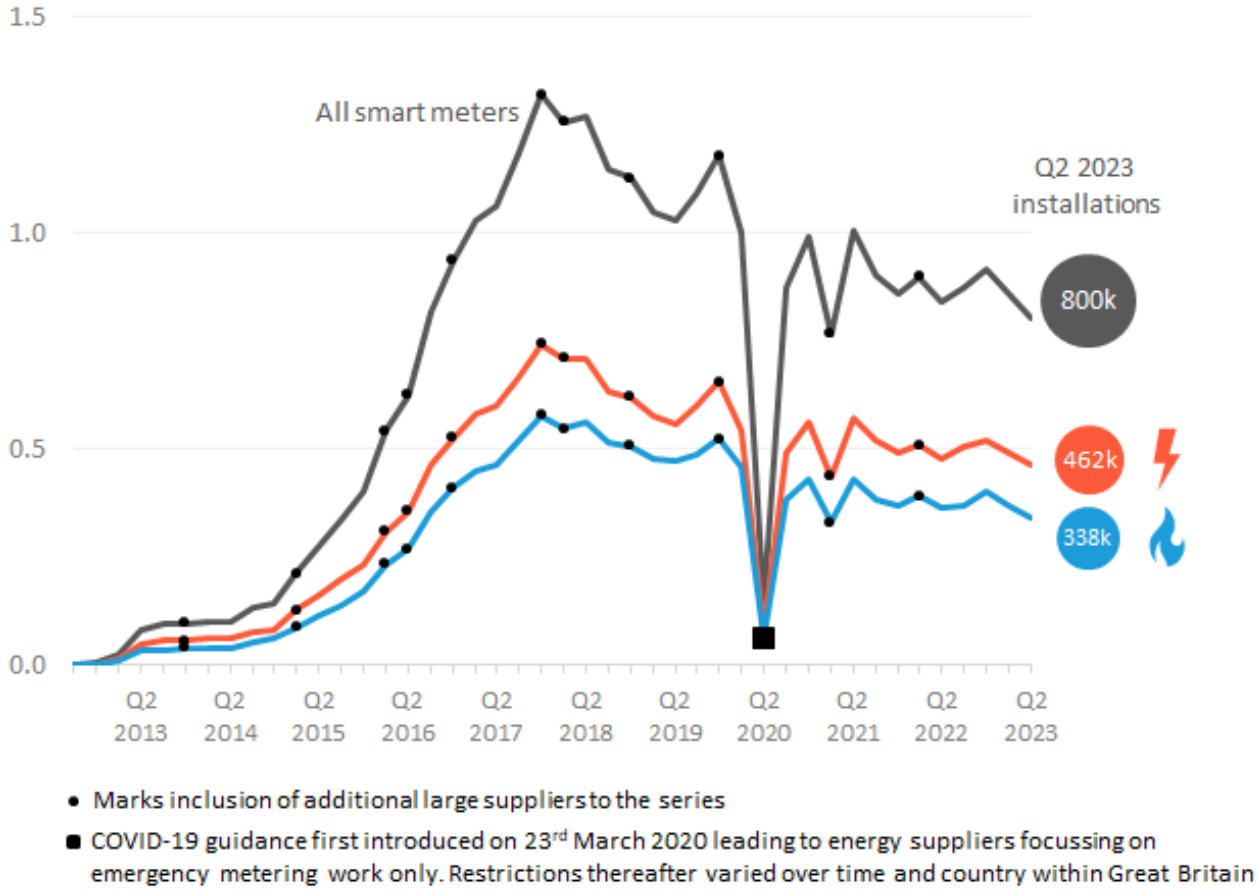
In the data tables accompanying this publication, Table 2 shows a quarterly breakdown of domestic meters installed by large suppliers, Table 4 shows the non-domestic installations by large suppliers and Table 6 gives the annual installation data for both large and small suppliers. All tables show the 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 the second quarter of 2023, **800,000** smart meters were installed by large energy suppliers. Installations during Q2 2023 were seven per cent lower than in Q1 2023, partly due to four fewer working days (there were 60 working days in Q2 compared to 64 in Q1). Gas installations decreased slightly more than electricity (eight per cent versus six per cent). Installations during Q2 2023 were also lower by five per cent compared to Q2 2022, which had the same number of working days.

Figure 4: Domestic smart meters installed by large energy suppliers decreased by seven per cent on Q1 2023

Great Britain, domestic meters installed by large energy suppliers
Q3 2012 to Q2 2023, millions



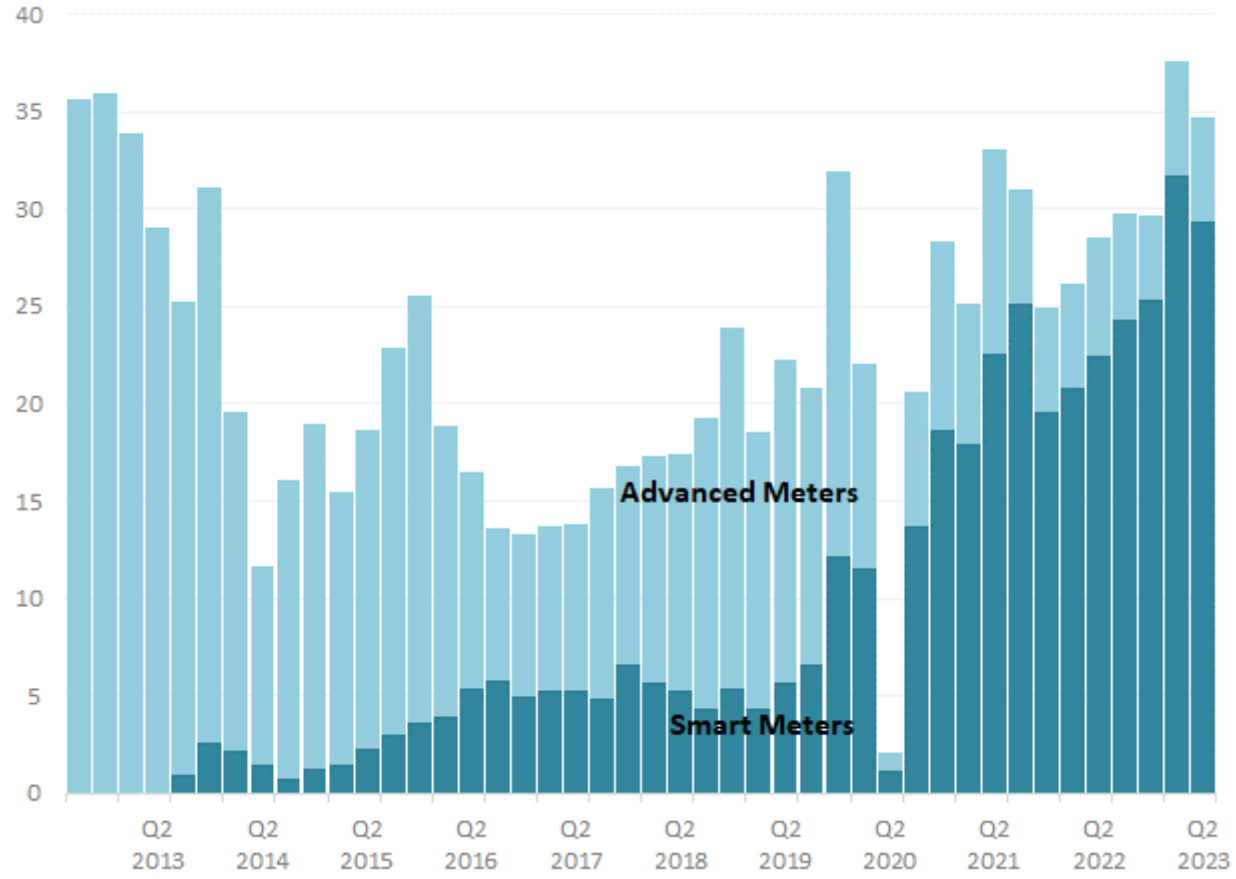
Source: Energy Suppliers reporting to Department for Energy Security & Net Zero

Meters installed in smaller non-domestic properties

Quarterly installation activity by large energy suppliers in non-domestic sites is shown in Figure 5. In Q2 2023, there were **34,700** smart and advanced meters installed in smaller non-domestic sites by large energy suppliers; a decrease of 7.8% on the number installed during Q1 2023. The majority of these installations are smart rather than advanced meters (85%); 6.2 percentage points higher than the same quarter in 2022 (79%) and the second highest proportion in this time series.

Figure 5: More than eight in ten smart/advanced meters installed at non-domestic sites were smart meters

Great Britain, non-domestic meters installed by large energy suppliers
Q3 2012 to Q2 2023, thousands



Source: Energy Suppliers reporting to Department for Energy Security & Net Zero.

Accompanying tables

The following tables are available in two formats[3] 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 (.xslx) 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 Department for Energy Security & Net Zero 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.

In addition to receiving the latest reporting data from energy suppliers, we continuously work with them to improve the quality of our statistics. Sometimes, for example after a change in their reporting or management systems, energy suppliers may update past information when it comes to light that previously supplied information was not correct.

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 was 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, DCC and Xoserve. In previous years these data sources have also been used for estimating installation activity and meters in operation for suppliers who have exited the market. A recent example of this was during 2021, when 23 small energy suppliers exited the market between August and December 2021.

Table 2: Suppliers transitioning to large supplier classification

Supplier	Added	Removed	Detailed information (where applicable)
Utility Warehouse	Q4 2013		
Shell Energy Retail	Q1 2015		Previously known as First Utility
OVO	Q1 2015		
Utilita	Q1 2016		
Extra Energy	Q2 2016	Q4 2017	Transitioned to small supplier classification
Co-operative Energy	Q4 2016	Q4 2019	Bought by Octopus Energy in 2019
Economy Energy	Q4 2017	Q1 2019	Ceased trading, customers transitioned to OVO Energy
Just Energy (previously Hudson Green Star)	Q4 2017	Q4 2020 Q4 2021	Domestic business bought by Shell Energy Retail Q4 2020. Nondomestic Shell Energy UK transitioned to small supplier group
Bulb	Q1 2018		
Octopus Energy	Q4 2018		
Avro Energy	Q4 2019	Q3 2021	Ceased trading, customers transitioned to Octopus Energy
Green Network Energy	Q4 2019	Q1 2021	Ceased trading, customers transitioned to EDF
Opus Energy	Q4 2019		
People's Energy	Q4 2020[4]	Q3 2021	Ceased trading, customers transitioned to British Gas
nPower		Q4 2020	Combined reporting with E.ON, following merger in 2019
E	Q4 2021[5]		
So Energy	Q4 2021[5]		Includes ESB

[4] Meters installed included in the large supplier group from the subsequent quarter

In addition to the recent market exits, there were also definitional changes to the large supplier classification, so that more suppliers are included. This meant that E and So Energy, transitioned into large energy suppliers (Table 2); their meters in operation were transitioned in the Q4 2021 publication to avoid disclosing individual supplier information and their installation activity in the Q1 2022 publication.

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:

British Gas	Octopus Energy	So Energy
Bulb*	Opus Energy	SSE Energy Solutions
E	OVO	Utilita
E.ON Next	Scottish Power	Utility Warehouse
EDF Energy	Shell Energy Retail	

* Octopus Energy acquired Bulb on 21st December 2022. For this publication, Octopus have reported Bulb installation data to us separately from Octopus Energy installations.

42 Small Energy suppliers at the end of 2022:

Avanti Gas	ENGIE	Smartest Energy Business
BES Utilities	Foxglove Energy	Square1 Energy
BPG Energy	Good Energy	Squeaky Clean Energy
Brook Green Supply	Green Energy	Switch Business Gas and Power
Bryt Energy	Marble Power	Tomato Energy Limited
Champion Energy	Maxen Power	Total Energies
Corona Energy	MB Energy	Tru Energy
Crown Gas & Power	National Gas	UK Gas Supply
D-ENERGi	Pozitive Energy	Unify Energy
Delta Gas & Power	Rebel Energy	United Gas & Power
Dodo Energy	Regent Gas	Valda Energy
Drax Energy	SEFE Energy (previously Gazprom)	Verastar
Dyce Energy	Shell Energy Business UK	Yorkshire Gas & Power
Ecotricity	Smartest Energy	YÜ 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	From 2022 Supply gas and/or electricity to at least 150,000 metering points irrespective of domestic/non-domestic market Pre-2022 Supplying either gas or electricity to at least 250,000 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	From 2022 Supply gas and/or electricity to less than 150,000 metering points irrespective of domestic/non-domestic market Pre-2022 Supplying either gas or electricity to less than 250,000 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

The next quarterly publication is planned for publication on 30 November 2023. 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 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 2021 covering UK, the data for 2022 is due to be published in December 2023.

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 Department for Energy Security & Net Zero 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@energysecurity.gov.uk

The Department for Energy Security & Net Zero 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 Department for Energy Security & Net Zero 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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