



## STATISTICAL RELEASE: EXPERIMENTAL NATIONAL STATISTICS

### Smart Meters, Great Britain, Quarterly report to end September 2013

#### Introduction

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 by the larger energy suppliers (i.e. British Gas, EDF Energy, E.ON, Npower, Scottish Power and SSE) in properties in the last quarter and the total in operation as of 30 September 2013.

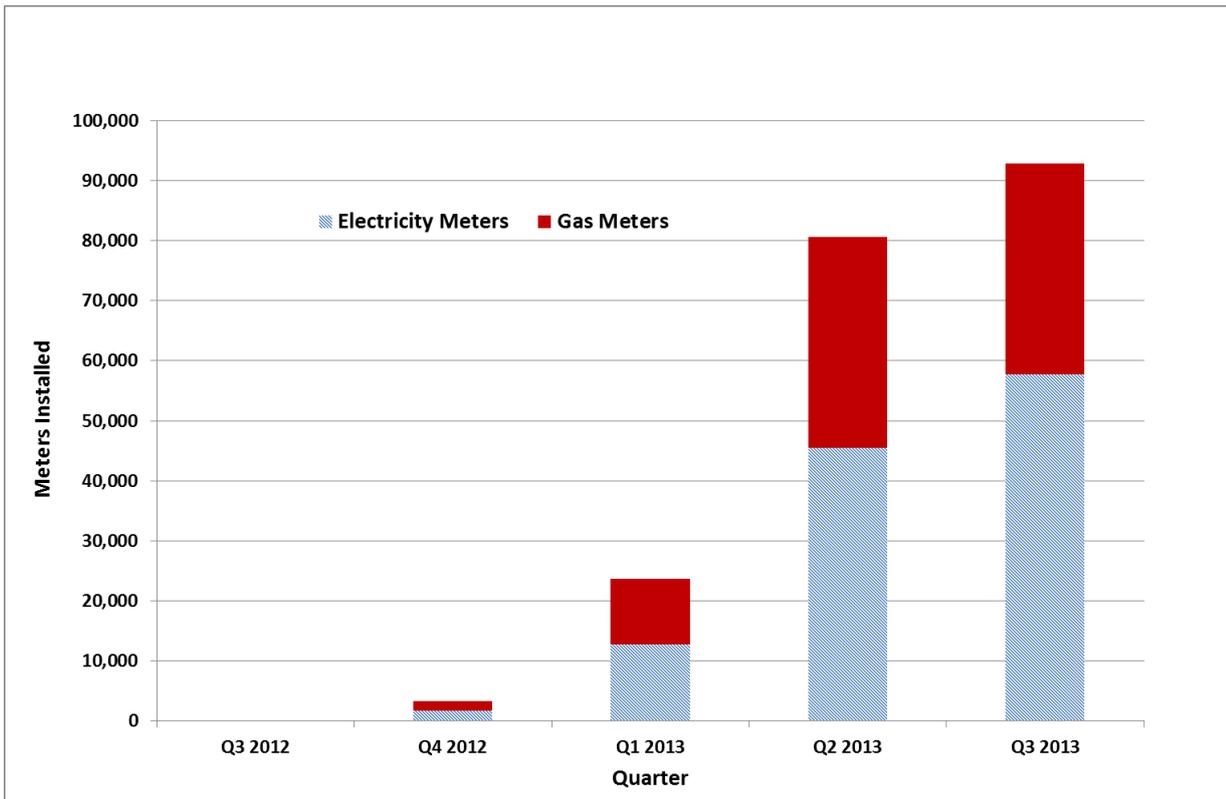
The Smart Metering Implementation Programme is being delivered in two phases. During the Foundation Stage, which began in March 2011, the Government is working with the energy industry, consumer groups and other stakeholders to put commercial and regulatory frameworks in place to support smart metering, trial and test systems, learn lessons from early installations and enhance the consumer experience. Most householders will then have smart meters installed by their energy company between autumn 2015 and 2020. Further information can be found on the [GOV.UK](http://GOV.UK) website.

The larger energy suppliers are currently installing smart, smart-type and traditional meters in domestic properties and smart, advanced and traditional meters in smaller non-domestic sites (an explanation of the differences between these meters is included on page 3 of this document).

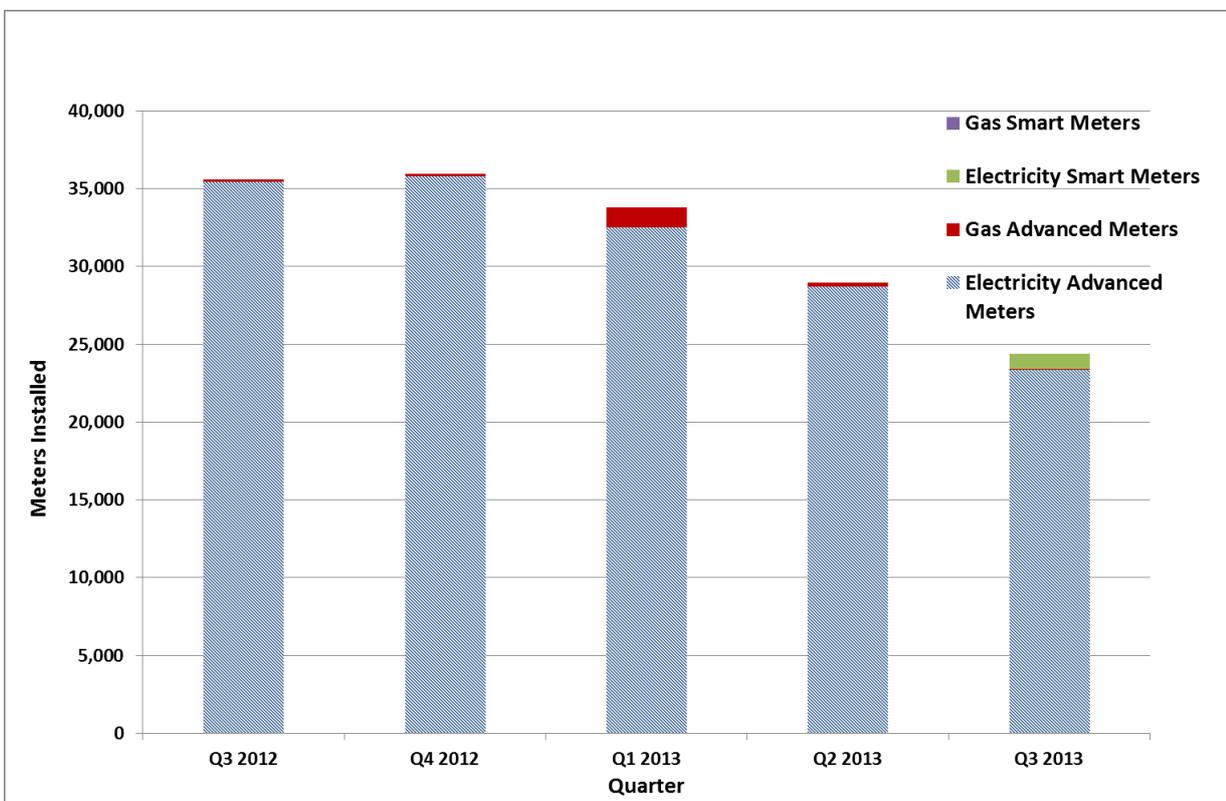
#### Key points

- 92,800 smart meters (57,600 electricity meters and 35,200 gas meters) were installed in domestic properties in quarter three 2013 (Chart 1 and Table 1). This compared to 80,600 smart meters installed in quarter two. A total of 200,400 have been installed to date.
- 176,800 smart meters are now operating in 'smart mode' in domestic properties across Great Britain (Table 2). This represents 0.4 per cent of all domestic meters.
- 900 smart meters (900 electricity meters) and 24,250 advanced meters (24,190 electricity meters and 60 gas meters) were installed in smaller non-domestic sites in quarter three 2013 (Chart 2 and Table 1). This compared to 29,000 advanced meters installed in quarter two and continues the fall seen in recent quarters.
- 508,500 smart and advanced meters are now operating in smaller non-domestic sites across Great Britain (Table 2). This represents 18.1 per cent of all smaller non-domestic site meters.

**Chart 1 – Number of smart meters installed by the larger energy suppliers in domestic properties, by fuel type and quarter**



**Chart 2 – Number of smart and advanced meters installed by the larger energy suppliers in smaller non-domestic sites, by fuel type and quarter**



## **Types of gas and electricity meters**

### Smart meters

Smart meters are the next generation of gas and electricity meters and they can offer a range of intelligent functions. Consumers will have near real time information on their energy consumption to help them control and manage their energy use, save money and reduce emissions. Smart meters will also provide consumers with more accurate information and bring an end to estimated billing.

A smart meter is compliant with the [Smart Meter Equipment Technical Specification \(SMETS\)](#) and has functionality such as being able to transmit meter readings to suppliers and receive data remotely. Energy suppliers are required to install SMETS compliant smart meters in domestic and smaller non-domestic sites by the end of 2020 (with the exception of some advanced metering being installed in smaller non-domestic sites - see below). Each energy supplier reports the number of smart meters it has installed and is operating in smart mode<sup>1</sup> to DECC and includes both meters that are SMETS compliant, and those they expect to upgrade to become SMETS compliant. Suppliers have indicated that most, if not all, of the smart meters currently installed will need to receive updates, which are expected to be delivered remotely, before they are fully SMETS compliant.

### Advanced meters

In smaller non-domestic sites, advanced meters may be installed as an alternative to SMETS compliant smart meters where they have been installed before April 2016 (or if contracts to install meters are in place before April 2016).

As a minimum, an advanced meter can store half-hourly electricity and hourly gas data, to which the customer can have timely access and to which the supplier can have remote access. However, meters described as “advanced” in this report may have many of the additional functions found in a smart meter that meets the Government’s technical specification.

### Smart-type meters

Some suppliers have chosen to make an early start by rolling out smart-type meters to domestic properties before smart meters were available. Smart-type meters offer some of the functionalities included in SMETS. Suppliers have learned lessons from installing and operating smart-type meters, which will benefit the smart meter roll-out and their customers have had early access to some of the benefits of smart metering. Nevertheless, smart-type meters installed in domestic properties will need to be replaced with SMETS compliant smart meters by the end of 2020 in accordance with suppliers’ roll-out obligations.

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<sup>1</sup> Smart Mode relates to a smart meter which is (fully functional and) providing information on energy use (and other information) to the customer (via the Home Area Network to the In-Home Display (IHD)) and to the energy supplier (via the Wide Area Network).

## Traditional meters

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

## **Types of Properties**

### Domestic properties

The customer is supplied with electricity or gas wholly or mainly for domestic purposes.

### Smaller non-domestic sites

A business or public sector customer whose site uses low or medium amounts of electricity (defined as a non-domestic site falling within Balancing and Settlement Code Profile Classes 1, 2, 3 or 4) or gas (defined as a 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 large private and public sector organisations.

## Results

This section provides a summary of the number of smart meters installed in quarter three 2013 and previous quarters and the number being operated in smart mode.

In total, in Great Britain there are 21.8 million gas meters (21.3 million domestic and 0.5 million non-domestic) and 28.2 million electricity meters (25.9 million domestic and 2.3 million non-domestic) operated by the larger energy suppliers. Chart 3 shows the proportion of meter types present in domestic and non-domestic properties, by fuel type, as at the end of September 2013.

**Chart 3 – Proportion of domestic and non-domestic meters by fuel type and meter type, end September 2013**

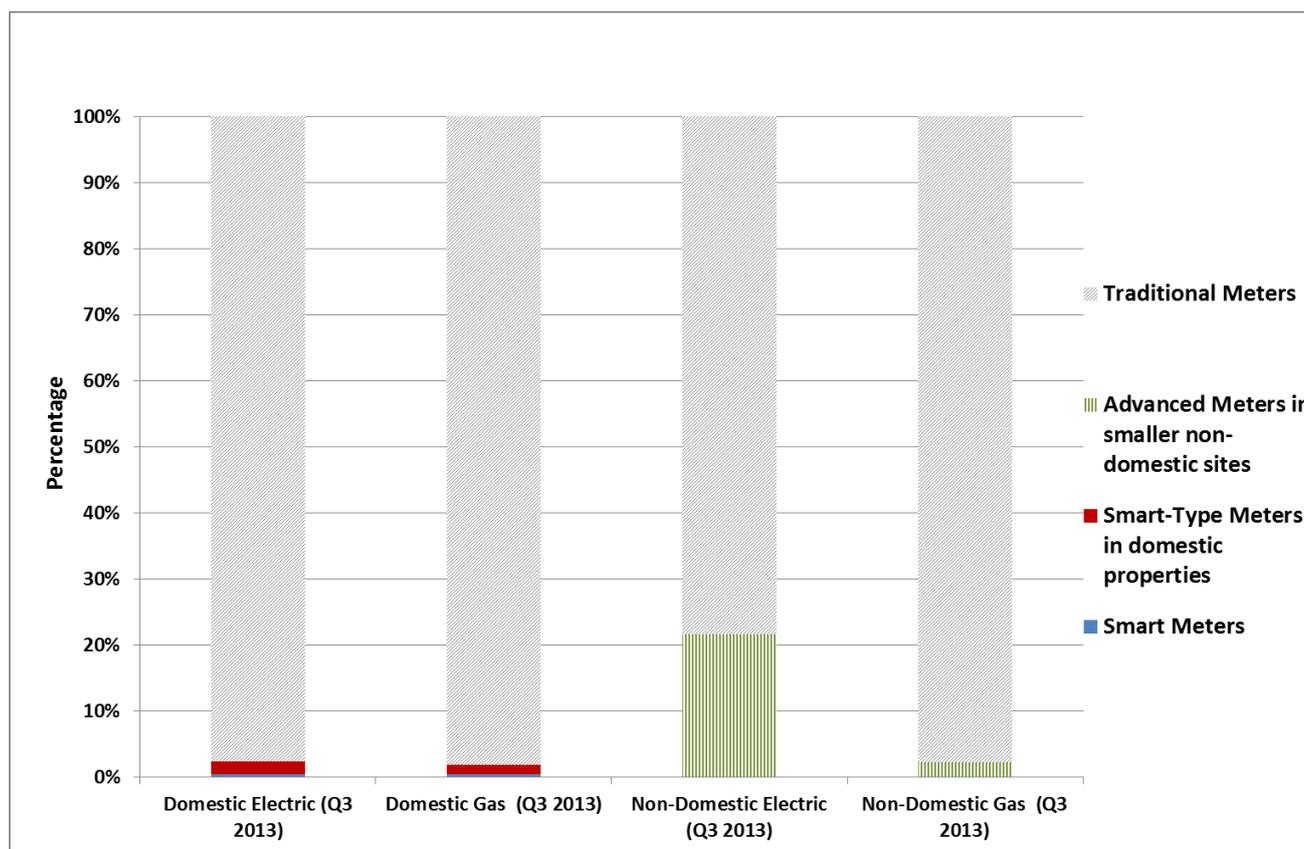


Table 1, below, presents the number of smart meter installations delivered within each quarter by domestic and non-domestic properties and meter type.

In quarter three 2013, there were 92,800 smart meters (an increase from 80,600 in quarter two 2013) and 60,000 smart-type meters (an increase from 17,900 in quarter two 2013) installed in domestic properties. In previous quarters, the number of smart-type meters being installed has been falling. However, some suppliers have increased their installation rates of smart-type meters in quarter three to test the installation process before the larger-scale installation of smart meters. In the same period, there were 24,250 advanced meters installed in non-domestic sites (a decrease from 29,000 in quarter two 2013) with suppliers gradually decreasing the number of advanced

installations per quarter. Smart meters were installed in smaller non-domestic sites for the first time in quarter three, with 900 smart electricity meter installations.

**Table 1: Number of gas and electricity smart meter installations by the larger energy suppliers by meter type and quarter**

Quarter	Domestic Properties		Non-Domestic Properties	
	Smart Meters	Smart-Type Meters [will need to be replaced by 2020]	Smart Meters	Advanced meters
Q3 2012	68	*	-	35,641
Q4 2012	3,241	61,106	-	35,978
Q1 2013	23,641	42,484	-	33,850
Q2 2013	80,586	17,941	-	29,012
Q3 2013	92,822	59,970	946	24,249

\*Data not available

**Table 1a: Number of electricity smart meter installations by the larger energy suppliers by meter type and quarter**

Quarter	Domestic Properties		Non-Domestic Properties	
	Smart Meters	Smart-Type Meters [will need to be replaced by 2020]	Smart Meters	Advanced meters
Q3 2012	36	*	-	35,455
Q4 2012	1,671	31,552	-	35,834
Q1 2013	12,678	19,656	-	32,529
Q2 2013	45,456	16,282	-	28,722
Q3 2013	57,632	41,062	946	24,189

\*Data not available

**Table 1b: Number of gas smart meter installations by the larger energy suppliers by meter type and quarter**

Quarter	Domestic Properties		Non-Domestic Properties	
	Smart Meters	Smart-Type Meters [will need to be replaced by 2020]	Smart Meters	Advanced meters
Q3 2012	32	*	-	186
Q4 2012	1,570	29,554	-	144
Q1 2013	10,963	22,828	-	1,321
Q2 2013	35,130	1,659	-	290
Q3 2013	35,190	18,908	-	60

\*Data not available

Table 2, below, shows the total number of meters, by type, being operated by the larger energy suppliers as of the end of each quarter. The numbers of smart meters in operation are those meters which the suppliers are currently operating in smart mode. This may be different from the total number installed for a number of reasons such as

technical issues preventing the meter from operating in smart mode (e.g. the meter is not able to communicate externally with the supplier via the wide area network) or because currently, when customers switch suppliers, the new supplier may choose to operate the smart meter in traditional mode.

At the end of September 2013 there were 176,800 domestic smart meters operating in smart mode (an increase from 89,400 at the end of quarter two 2013). This compares with the total number of smart meters installed of 200,400 and reflects some meters being operated in traditional mode.

There were 804,400 domestic smart-type meters operating (an increase from 744,500 in quarter two 2013). Despite the recent increase from quarter two, we expect that suppliers will increasingly focus on smart meters, therefore this total is not expected to continue growing significantly in future quarters.

There were 508,500 non-domestic smart and advanced meters (a decrease from 520,000 in quarter two 2013) in operation. We expect the reduction was a result of one supplier providing more accurate information on their non-domestic meter portfolio and some meters being operated in traditional mode following customers switching suppliers.

The number of traditional meters in operation fluctuates between quarters both in domestic and smaller non-domestic properties. This could be for a variety of reasons which may include for example, meter installations in new buildings, building demolitions and customers switching to and from smaller suppliers.

**Table 2: Number of gas and electricity meters operated by the larger energy suppliers by meter type at end of quarter**

Quarter	Domestic Properties			Non-Domestic Properties	
	Smart Meters (operating in Smart Mode)	Smart-Type Meters	Traditional Meters	Smart and Advanced Meters	Traditional Meters
Q3 2012	256	622,919	46,927,381	365,007	2,324,686*
Q4 2012	3,200	684,025	47,041,924	454,233	2,397,238
Q1 2013	24,040	726,509	46,613,562	511,069	2,369,005
Q2 2013	89,375	744,450	46,231,380	520,039	2,298,121
Q3 2013	176,817	804,420	46,227,893	508,534	2,307,641

\* Estimated - Q3 2012 non-domestic traditional meters

**Table 2a: Number of electricity meters operated by the larger energy suppliers by meter type at end of quarter**

Quarter	Domestic Properties			Non-Domestic Properties	
	Smart Meters (operating in Smart Mode)	Smart-Type Meters	Traditional Meters	Smart and Advanced Meters	Traditional Meters
Q3 2012	132	376,423	25,786,824	354,969	1,771,055*
Q4 2012	1,739	407,975	25,766,990	444,943	1,864,295
Q1 2013	12,049	427,631	25,495,489	500,960	1,832,983
Q2 2013	50,038	443,913	25,307,746	509,436	1,790,147
Q3 2013	104,704	484,975	25,272,273	497,756	1,819,499

\* Estimated - Q3 2012 non-domestic traditional meters

**Table 2b: Number of gas meters operated by the larger energy suppliers by meter type at end of quarter**

Quarter	Domestic Properties			Non-Domestic Properties	
	Smart Meters (operating in Smart Mode)	Smart- Type Meters	Traditional Meters	Smart and Advanced Meters	Traditional Meters
<b>Q3 2012</b>	124	246,496	21,140,557	10,038	553,631*
<b>Q4 2012</b>	1,461	276,050	21,274,934	9,290	559,271
<b>Q1 2013</b>	11,991	293,878	21,118,073	10,109	536,022
<b>Q2 2013</b>	39,337	300,537	20,923,634	10,603	507,974
<b>Q3 2013</b>	72,113	319,445	20,955,620	10,778	488,142

\* Estimated - Q3 2012 non-domestic traditional meters

## **Annex A – Background to Smart Meter Roll-out**

The Government's vision is for every home in Great Britain to have smart electricity and gas meters and for smaller non-domestic sites to have smart or advanced metering suited to their needs. Smart metering is a major national programme: one of the largest and most complex investment programmes undertaken by the energy industry. The programme aims to roll-out over 50 million smart electricity and gas 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.

The roll-out of smart meters will play an important role in Britain's transition to a low-carbon economy and help meet some of the long-term challenges in ensuring an affordable, secure and sustainable energy supply.

The Smart Metering Implementation Programme is being delivered in two phases. During the Foundation Stage, which began in March 2011, the Government is working 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, learn lessons from early installations and enhance the consumer experience. Most householders will then have smart meters installed by their energy company between autumn 2015 and 2020.

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. Suppliers' proposed approaches to the roll-out vary and take into account factors such as the location of their customer base and installation workforce and when their customers would need their traditional meters replaced on a routine basis. The approach adopted by suppliers may change as they progress through the roll-out.

Suppliers are using 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 the energy suppliers start up their programmes. However, the majority of customers will receive their meters between 2015 and 2020.

## **Annex B - Data and Processing**

The Smart Meter Implementation Programme request (on a quarterly basis) data relating to the number of smart and traditional meters from the larger energy suppliers. This will enable the Programme to monitor the roll-out of smart meters over time. More detail is provided on the methodology and quality assurance in the [methods note](#) but in brief:

Suppliers are responsible for aggregating their own data to enable them to provide information on the number and type of meters installed and operating each quarter. Each supplier extracts data from their internal IT systems, aggregates and quality checks it, before submitting to DECC who in turn quality assure the data and resolve any issues arising with suppliers. Each supplier provides this information one month after the end of

each quarter to ensure that statistics produced are timely and relevant. The data is aggregated to industry level ensuring that commercial sensitivity is respected.

The data only covers the meters installed and operated by the larger energy suppliers and has not been adjusted to take account of smaller supplier installations. The larger energy suppliers are estimated to supply approximately 99%<sup>2</sup> of domestic properties and approximately 90% of smaller non-domestic sites and therefore represent a large sub-set of meters found in other Departmental consumption statistics<sup>3</sup>. Smaller suppliers will begin reporting information to DECC on an annual basis from 2014.

## **Experimental Statistics**

These estimates are released as Experimental National Statistics which means they are official statistics undergoing an evaluation process prior to being assessed as 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 [methods note](#).

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.

## **Further information and feedback**

Any enquiries or comments in relation to this statistical release (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](mailto:EnergyEfficiency.Stats@decc.gsi.gov.uk)

Contact telephone: 0300 068 5657

The statistician responsible for this publication is Gary Smith.

Further information on energy statistics is available at

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

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<sup>2</sup> The Retail Market Review, Ofgem, October 2012: <https://www.ofgem.gov.uk/ofgem-publications/39457/retail-market-review-updated-domestic-proposals.pdf>

<sup>3</sup> Regional and local authority electricity consumption statistics, DECC, 28 March 2013: <https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011>

## **Next release**

The next quarterly publication is planned for publication on **13 March 2014 at 9.30am.**

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