

Proposed changes to DECC domestic energy bills estimates

Background

DECC currently publish bill estimates in Quarterly Energy Prices (QEP, tables 2.2.1 through 2.2.4 for electricity and tables 2.3.1 through 2.3.4 for gas). These are based on standard household consumption levels which have remained unchanged since DECC started publishing such estimates in the 1990's. Currently DECC use 3,300 kWh per year as the average electricity consumption for households using standard meters and 6,600 kWh per year (with night time consumption of 3,600 kWh per year) for those using Economy 7 meters. For gas, DECC use 18,000 kWh per year as the average consumption level.

Using the current method, in March 2013 DECC published estimates of energy bills for 2012. Estimates were published showing bills by the three payment methods (standard credit; direct debit; and pre-payment meters); and whether households were with their home or a non-home supplier (British Gas is the home supplier for all GB gas customers, with the home supplier for electricity based on the holder of the licence following privatisation at the end of the 90's). The table on the right below is an example to show the home / non-home split.

Tables 1 & 2 - Average Energy Bills 2012¹

	Standard credit	Direct debit	Pre-payment	Overall		Home Standard credit	Non-home Standard credit
Electricity	£ 500	£ 460	£ 501	£ 479	Electricity	£ 516	£ 487
Gas	£ 839	£ 773	£ 828	£ 800	Gas	£ 865	£ 804
Total	£ 1,339	£ 1,233	£ 1,329	£ 1,279	Total	£ 1,381	£ 1,291

However, in the past eight years there has been a noticeable reduction in average gas consumption, which has lead DECC to review these estimates. Domestic electricity consumption increased sharply between 1990 and 2005, but has since fallen slightly since then. Long term series of domestic electricity and gas consumption are published in a number of DECC's statistical publications, including: the Digest of UK Energy Statistics (DUKES)²; and in Energy Consumption in the UK³ (ECUK).

DECC proposed methodology

DECC plans to review the consumption levels used and then publish revised estimates in March 2014. DECC will consider the detailed time series of consumption levels and aims to produce a central estimate to be used reflecting a mean estimate for consumption. In future DECC plan to routinely review consumption levels used in bill estimates every five years.

Table 3.07 of ECUK currently contains estimates of average consumption levels for the last five years, on both an unadjusted and a temperature corrected basis. Over the past five years, average electricity consumption has fallen to around 4,200 kWh per year, with gas consumption averaging around 15,600 kWh per year. The high value for electricity is due to the data in table 3.07 reflecting consumption of households on both standard and economy 7 tariffs. For households on standard electricity tariffs average consumption has recently averaged below 4,000 kWh (derived from DUKES). A breakdown of consumption by meter type is published in table 5.3 of DUKES. For the purposes of the bill estimates, consumption of those on standard electricity tariffs is split from those using economy 7 tariffs.

¹ QEP - <https://www.gov.uk/government/statistical-data-sets/annual-domestic-energy-price-statistics>

² DUKES - www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

³ ECUK - www.gov.uk/government/collections/energy-consumption-in-the-uk

The table below shows average annual consumption over the last five years.

Table 3 – Average energy consumption in kWh (source ECUK)

	Electricity		Gas	
	Unadjusted	Temperature adjusted	Unadjusted	Temperature adjusted
2008	4,599	4,627	16,546	16,976
2009	4,526	4,563	15,217	15,608
2010	4,513	4,414	17,774	15,656
2011	4,221	4,328	13,252	14,914
2012	4,227	4,226	15,281	15,257

An alternative data source is meter-point data which is used by DECC for producing sub-national energy consumption statistics.

Table 4 – Average energy consumption in kWh (source DECC sub-national data)

	Electricity ⁴	Gas ⁵
2008	4,198	16,907
2009	4,152	15,383
2010	4,148	15,156
2011	4,078	14,205
2012	4,014	14,080

The above electricity data again combines consumption of those on standard meters with those on economy 7 meters. For 2012, average consumption from this dataset suggest that households with standard meters consumed 3,670 kWh during the year, with consumption on profile 2 (economy 7) meters averaging 5,628 kWh. The gas data is temperature corrected with the data reflecting consumption in the period from October through to September rather than a calendar year. For electricity, it should be noted that the above data is based on meter point data; some customers with economy 7 meters will be on standard tariffs.

Ofgem publications

In September 2013, Ofgem published documents⁶ concluding that changes should be made to the average consumption levels they use. Ofgem publish two different averages, with one reflecting mean consumption levels, whilst another aims to show median levels. Distributions of both gas and particularly electricity consumption are positively skewed, with more consumers using less than the mean level, so different averages are of use for different purposes.

Following their consultation Ofgem decided that they would change their mean consumption levels from 4,000 kWh down to 3,800 kWh for standard electricity, and from 16,900 kWh down to 15,300 kWh for gas. Their median consumption levels were changed to 3,200 kWh for standard electricity (from 3,300 kWh), and 13,500 kWh for gas (from 16,500 kWh).

Revisions

DECC plans to revise all back data for bills in line with the new volume estimates produced, so that the time series of bills shown reflect changes in average prices.

At the same time, DECC plan to make other amendments to the series published. In particular DECC will produce estimates of average bills across all payment types for historical data, as this is currently only shown from 2007 onwards.

⁴ www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011

⁵ www.gov.uk/government/statistical-data-sets/gas-sales-and-numbers-of-customers-by-region-and-local-authority

⁶ www.ofgem.gov.uk/electricity/retail-market/monitoring-data-and-statistics/electricity-and-gas-supply-market-indicators

Standing charges

In calculating bills, for the most recent years, DECC show the split between the fixed and variable elements of bills, and these are published in tables 2.2.4 and 2.3.4 of QEP. Currently, for 2012, the fixed elements of bills (standing charges or the additional costs of unit 1 prices over unit 2 prices for two rate tariffs) average £61 for standard electricity and £113 for gas. These tables can be used to estimate bills for alternate consumption levels.

Within year consumption

In calculating average bills, DECC receives data on the number of customers and prices by tariff. To produce an average bill DECC needs to make assumptions regarding how that consumption is spread across the year. The table below shows the breakdown for electricity and gas. Following a recent check, DECC is not planning to amend these seasonal splits.

Table 5 – Quarterly Consumption Splits

	Electricity	Gas
Quarter 1	30%	40%
Quarter 2	20%	20%
Quarter 3	20%	10%
Quarter 4	30%	30%

Bills based on actual consumption

Actual average consumption varies sharply due to variations in the weather. In March editions of Energy Trends, DECC have published estimates of actual bills, reflecting the changes in consumption in the latest years. DECC plans to continue publishing these estimates, with estimates of bills for 2013 to be published on Thursday 27th March 2014.

This additional analysis together with DECC average bills helps to show the main effects on consumers during the latest year. In particular between 2010 and 2011, despite prices rising by 9.2%, actual bills fell by 7.2%, as consumption fell sharply reflecting the milder weather in 2011 compared to 2010. In contrast both prices and consumption increased into 2012 resulting in bills increasing by around 15%.

User views

DECC is interested in users' views on these proposals. Please contact either of the articles authors before the end of February if you have any comments or thoughts regarding DECC's proposals.

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