

Domestic energy bills in 2017: The impact of variable consumption

Introduction

From March 2018, Quarterly Energy Prices (QEP) includes two additional tables that cover estimated annual bills based on actual consumption and temperature adjusted consumption. These tables, Table 2.2.5 (electricity) and Table 2.3.5 (gas) which supplements the tables showing bills for fixed consumption, can be found in the latest addition of QEP at:

www.gov.uk/government/statistical-data-sets/annual-domestic-energy-price-statistics

Summary

BEIS estimate that annual standard electricity bills based on actual consumption rose by 1.9 per cent from 2016 to 2017, with gas bills falling by 3.1 per cent over the same period. This is as a result of decreases in gas prices in 2017, and decreases in average consumption of both standard electricity and gas. Combined annual actual bills are at their lowest in cash terms since 2011 at £1,112 (see Table 2), and in real terms, bills are at their lowest in the current decade (see Table 3). Estimates using temperature adjusted consumption are also available in Tables 2.2.5 and 2.3.5.

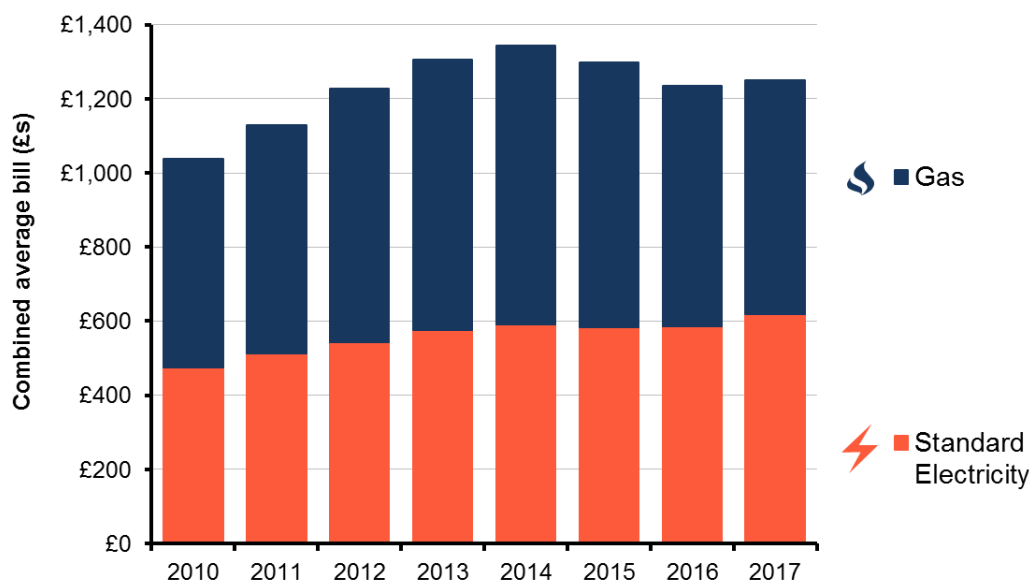
Drivers of actual bills

The two key drivers of actual bills are the unit prices of energy and the amount of energy consumed. There are several further factors that influence consumption, such as increased energy efficiency through household insulation or more efficient appliances, but the most influential factor of gas consumption is the weather.

Drivers of actual bills - price changes

Annual energy bills can be calculated based on fixed energy consumption levels: a given consumption level of energy that does not change from year to year¹. This allows price comparisons between years as the impacts of weather and energy efficiency measures on bills that influence consumption are removed. Average combined bills between 2010 and 2017 are shown in Chart 1, with data available in Table 2.2.1 for electricity and Table 2.3.1 for gas of QEP.

Chart 1: Domestic energy bills based on fixed consumption levels 2010-2017



¹ BEIS publishes estimates of annual domestic electricity and gas bills in its Quarterly Energy Prices (QEP) publication. These bills are based on quarterly pricing information collected from energy suppliers. They are calculated using standard annual consumption assumptions of 3,800kWh for standard electricity and 15,000kWh for gas.

Annual domestic energy bills based on actual consumption

The extent to which price and consumption changes cause overall bill changes can be analysed by holding one driver constant so any change in the bill is attributable to the other. Overall, for standard electricity and gas combined, there is around a £36 fall in the average energy bill from 2016 to 2017.

If standard electricity prices had remained static from 2016 to 2017, bills would have decreased by £21 due to the fall in average consumption. If consumption had remained static bills would have increased by £32 due to the increase in price. The combination of these factors caused average standard electricity bills to increase by around £10.

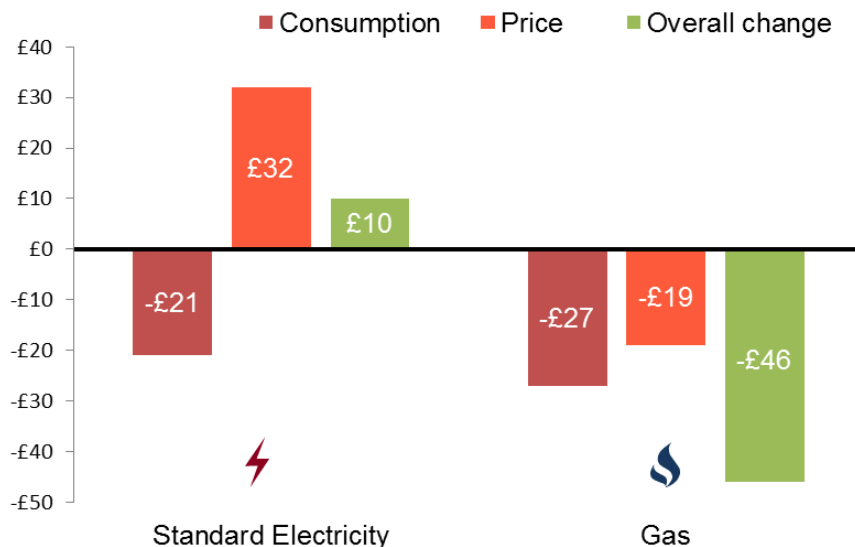
For gas, if prices had remained static from 2016 to 2017, bills would have decreased by £27. If consumption had remained static, bills would have decreased by £19 due to the decrease in prices. Together, these factors resulted in a decrease of £46 for the average actual gas bill. This is demonstrated in Chart 2 below.

The above splits are equivalent to stating that the price effect is adding around £13 to energy bills (£32 from electricity and a £19 reduction from gas), but the fall in average consumption (a £23 fall in electricity and a £26 fall in gas) has outweighed this price effect. This is also shown in Table 1 below.

Table 1: Summary of effects that have altered energy bills between 2016 and 2017

| | Standard electricity (£) | Gas (£) | Total (£) |
|------------------------|--------------------------|---------|-----------|
| Price effect (£) | +32 | -19 | +13 |
| Consumption effect (£) | -21 | -27 | -49 |
| Combined effect (£) | +10 | -45 | -36 |

Chart 2: 2016 to 2017 changes in energy bills attributable to changes in consumption and price



The data below shows average energy bills based on actual consumption, split by standard electricity and gas, in both cash and real terms. To see an extended time series going back further, see the link at the beginning of this article.

Table 2: Average energy bills based on actual consumption (cash prices)

| | Standard electricity | Gas | Total |
|---------------------|----------------------|-------|--------|
| 2010 | £518 | £647 | £1,165 |
| 2011 | £527 | £581 | £1,108 |
| 2012 | £563 | £706 | £1,269 |
| 2013 | £591 | £748 | £1,339 |
| 2014 | £578 | £641 | £1,219 |
| 2015 | £557 | £630 | £1,187 |
| 2016 | £555 | £593 | £1,148 |
| 2017 | £565 | £547 | £1,112 |
| Change in 2016-2017 | £10 | -£46 | -£36 |
| % Change | 1.9% | -7.8% | -3.1% |

Table 3: Average energy bills based on actual consumption (in 2010 prices)

| | Standard electricity | Gas | Total |
|---------------------|----------------------|-------|--------|
| 2010 | £518 | £647 | £1,165 |
| 2011 | £516 | £570 | £1,086 |
| 2012 | £544 | £681 | £1,225 |
| 2013 | £560 | £708 | £1,268 |
| 2014 | £538 | £598 | £1,136 |
| 2015 | £516 | £584 | £1,100 |
| 2016 | £504 | £539 | £1,043 |
| 2017 | £503 | £487 | £990 |
| Change in 2016-2017 | -£1 | -£52 | -£53 |
| % Change | -0.2% | -9.6% | -5.1% |

Next steps

These tables will be revised in July when DUKES (Digest of UK Energy Statistics) is published to reflect revised average consumption data. It will then be updated at this time next year to update for 2018 data.

User feedback

Please send any comments or queries regarding this analysis to the contact details below:

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