

National Energy Efficiency Data-Framework analysis

Introduction

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.

The first of two NEED reports during 2013 was published on 27 June. It presents analysis of domestic gas and electricity consumption using data available in NEED. The report covers energy consumption in 2011 by property attributes, household characteristics, region and socio-demographic classifications. It also includes trends in energy consumption between 2005 and 2011. For the first time, information for Wales and consumption by number of adults in the property is also being published. This article provides a summary of the report. The full report can be found at: www.gov.uk/government/publications/national-energy-efficiency-data-framework-need-report-summary-of-analysis-2013-part-1.

Results are based on a representative sample of data for England and Wales, with the exception of trends, which cover only England between 2005 and 2010 and both England and Wales for 2011.

The relationship between energy use and any individual characteristic is complex, but there is a high correlation between certain characteristics and a household's energy use (for example, size of property or household income). The report provides insight into how each characteristic relates to energy use, but makes no attempt to control for other characteristics¹.

Domestic consumption

Of the variables in NEED, property size has the greatest influence on households' gas and electricity consumption (see Chart 1).

Chart 1: Median electricity and gas consumption in 2011, by area of property, m²

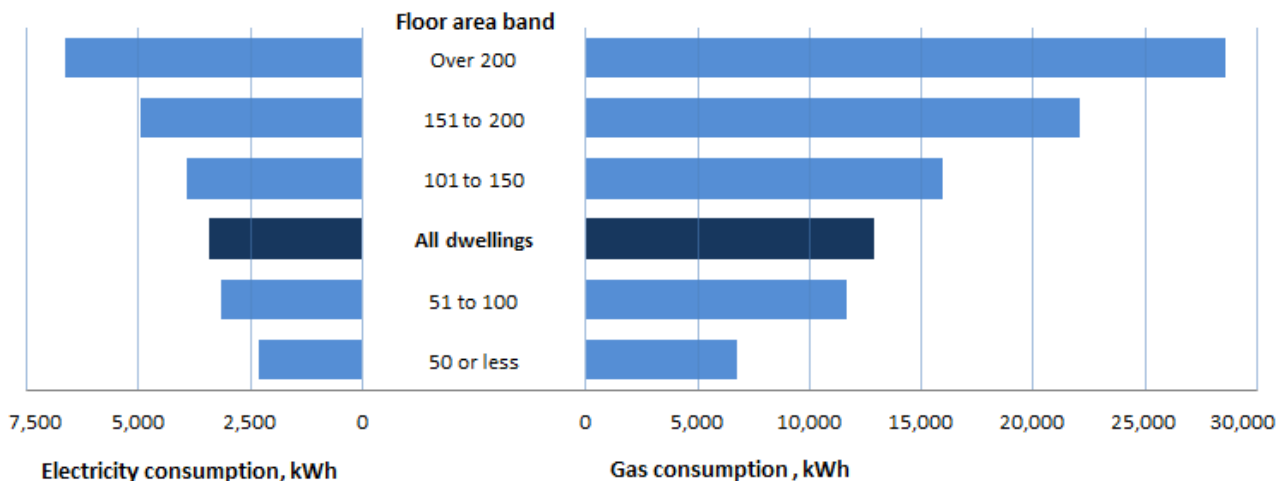
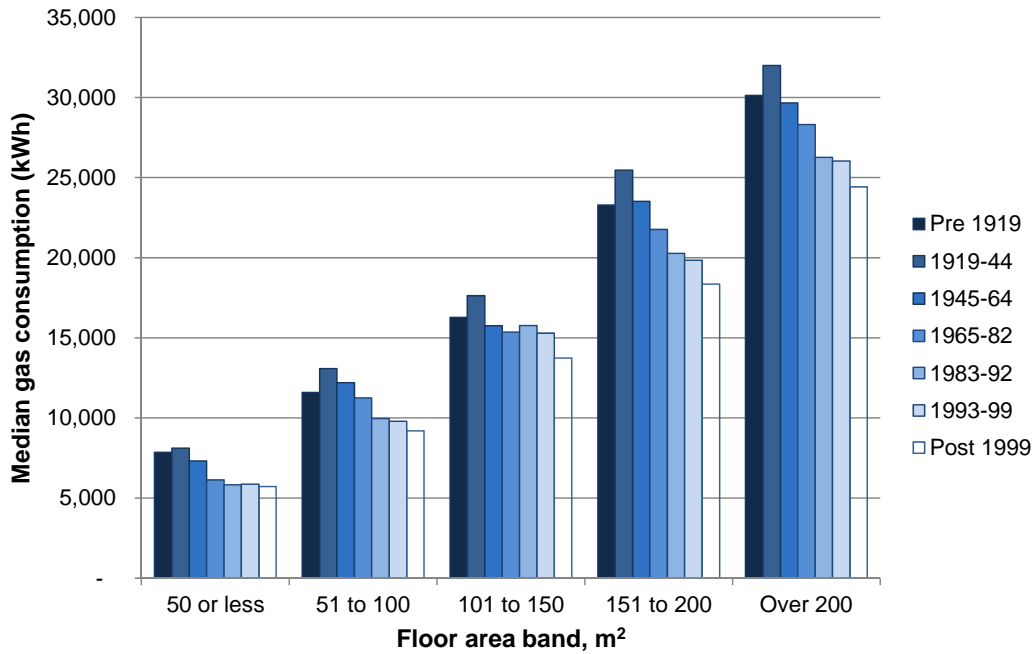


Chart 1 shows that properties in the larger floor area bands have a higher typical consumption, for both gas and electricity. However, there is a significant amount of variation which is not explained by this single variable. Chart 2 shows how gas consumption by property age varies for properties even within the same floor area category.

¹ This was explored in regression and econometric models of gas consumption presented in the November 2012 NEED report, Annexes E and F: www.gov.uk/government/publications/national-energy-efficiency-data-need-report-summary-of-analysis. Further work in this area is also planned and will be published when available.

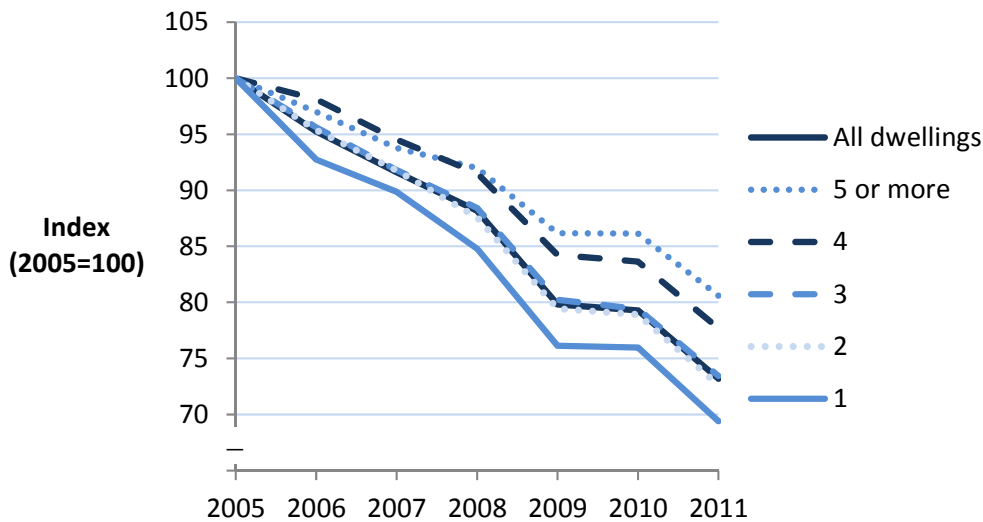
Chart 2: Median gas consumption in 2011, by floor area and property age



Trends in domestic consumption

Median consumption has generally decreased over the period 2005 to 2011. While reductions have been seen for all property and household types, the scale of the reduction varies for different groups. This is demonstrated for number of bedrooms in Chart 3. In general, properties with fewer bedrooms showed a greater percentage decrease in median consumption over the period.

Chart 3: Change in median gas consumption by number of bedrooms, 2005 to 2011 (2005=100)



The results from this work have provided important evidence to enable DECC to further develop its understanding of how energy is used in households. DECC will continue to work to understand more about these areas and expand the analysis undertaken with data from NEED; with results published as analysis is completed. The next publication will be Part II of this report in November 2013, summarising the impact of energy efficiency measures.

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