

## HFS Analysis of Scottish Government Data on Residential Sector Carbon Emissions

The following charts show an analysis of Scottish Government data on residential sector carbon emissions to provide an estimate of emissions contributions between existing stock and new build subsectors. The analysis is derived through the creation of a “notional” emissions rate per dwelling (carbon emissions against the number of households), with new build emissions lowered in accordance with the carbon reduction targets set within Building Standards Technical Handbooks between 2005 and 2015.

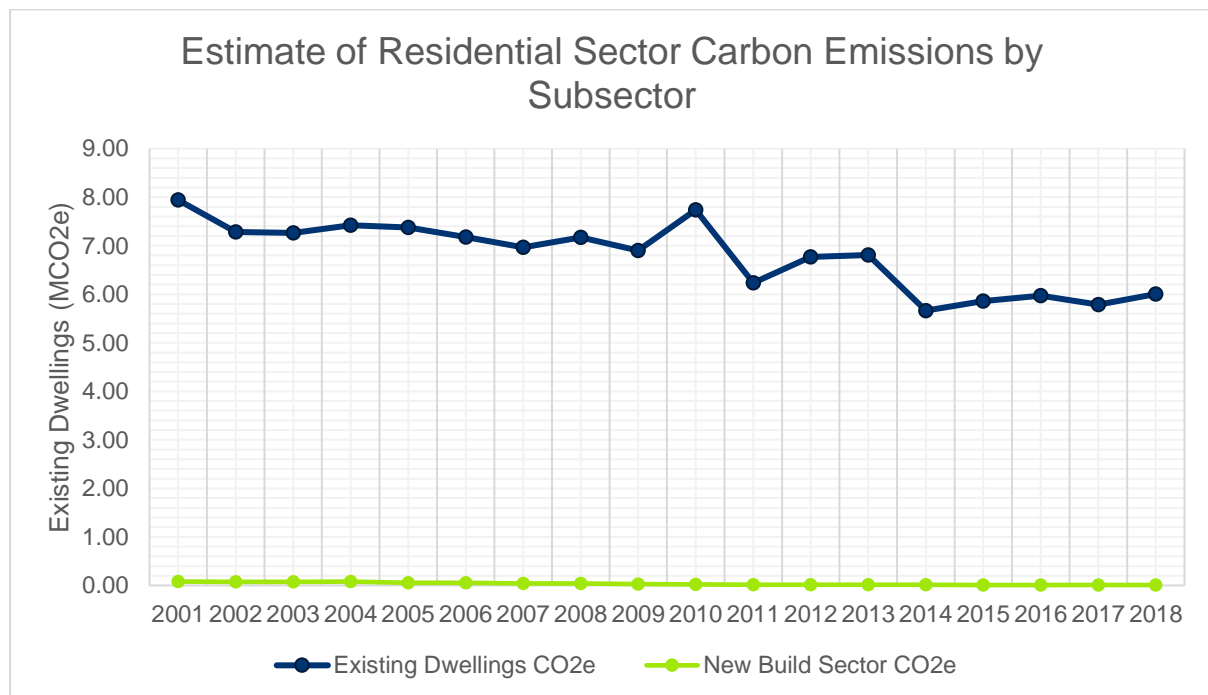
### Data Sources:

Greenhouse Gas Emissions by National Communications Category – Scottish Government (June 2020)

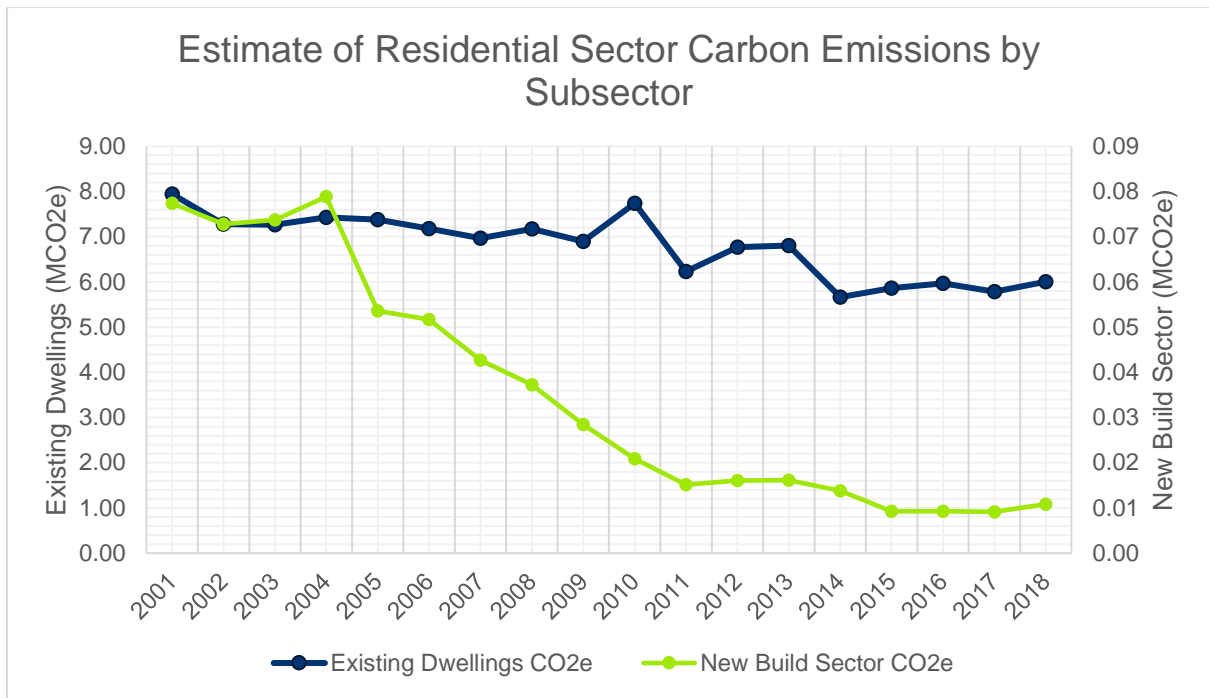
Household Estimates – Scottish Government (June 2020)

New Build Housing Starts & Completions – Scottish Government (April 2021)

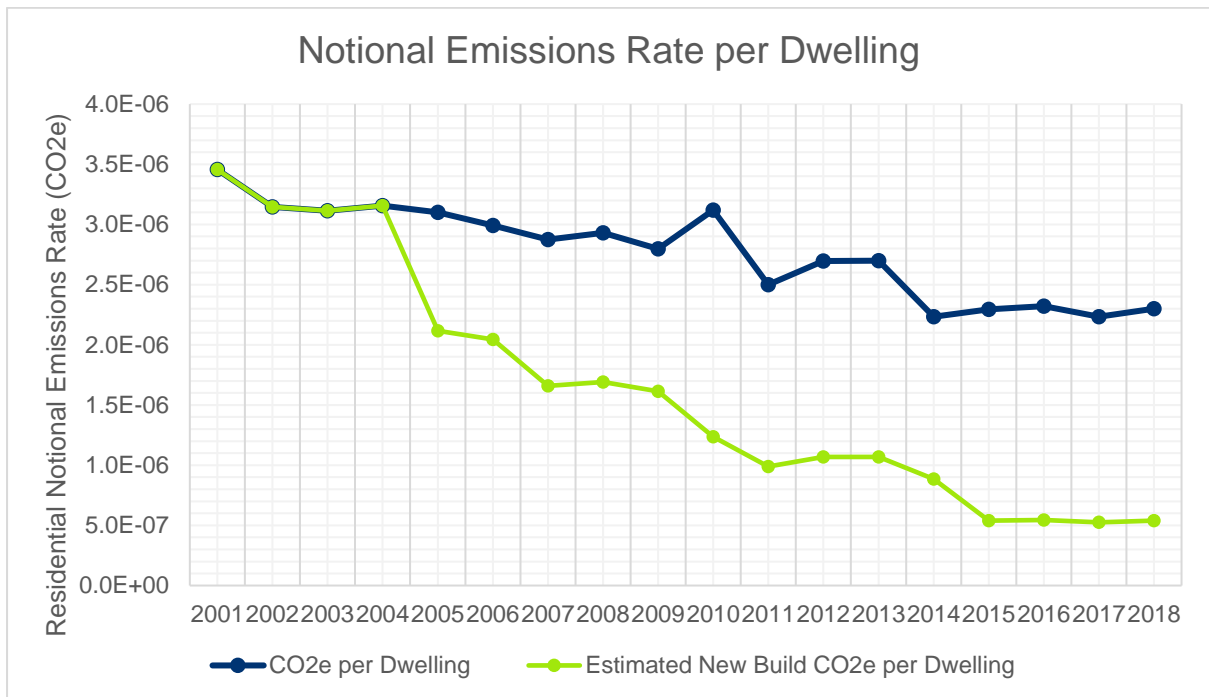
Technical Handbooks (Domestic) – Scottish Government Building Standards Division



The chart above shows the estimated carbon emissions associated with new build and existing homes for each year from 2001. With new housing delivery accounting for less than 1% of the existing housing stock, emissions for the new build sector (based on annual completions) are negligible. The chart below shows the same data on two axes, highlighting the emissions reductions from the new build sector that relate to improvements to building standards section 6 energy over this period but also as a result of the reduction in housing completions following the global recession in 2007/08.



To show a like for like comparison the chart below shows the notional emissions rate per dwelling for both new build and existing homes. This provides a more direct visualisation to compare the emissions reductions on a like for like basis.



Finally, the chart below provides an accumulative total of carbon emissions for the new build sector from 2010 against the residential sector carbon emissions total to help visualise the impact new homes delivery has on overarching targets.

## Estimate of Accumulative Impact of New Build Sector Carbon Emissions

