Average temperature of homes

The mean internal temperature of UK homes during the winter months was 17.5˚C in 2007, compared to 16˚C in 1990. Almost no homes had air conditioning. Historically, the temperature people choose to heat their homes to has increased over the years.

Level 1

Level 1 assumes that the mean internal temperature of UK homes during the winter months continues to increase to 20˚C in 2030, then stabilises. Use of air conditioning grows to 50 TWh/y in 2050.

Level 2

Level 2 assumes that the mean temperature increases slightly to 18˚C in 2050. Use of air conditioning grows to 31 TWh/y in 2050.

Level 3

Level 3 assumes that the mean temperature decreases slightly to 17˚C in 2050. Use of air conditioning grows to 14 TWh/y in 2050.

Level 4

Level 4 assumes that the mean temperature decreases to 16˚C in 2050 , which is equivalent to the mean internal house temperature in 1990. There is no use of air conditioning in the summer.

Householders can experience today's levels of thermal comfort while also reducing energy demand by wearing warmer clothing or by heating the house in a smarter way. Using a 13 TOG winter duvet rather than a 12 TOG one offers the same level of thermal comfort in a house with a 1.5˚C lower internal temperature. Similarly, wearing one extra layer of clothing can compensate for a 1.5˚C drop in temperature. For an older home that is otherwise maintained at 17.5˚C, an alternative to reducing the temperature by 1.5°C is to leave it unheated for two or three additional hours per day, which is likely to result in the same energy savings.

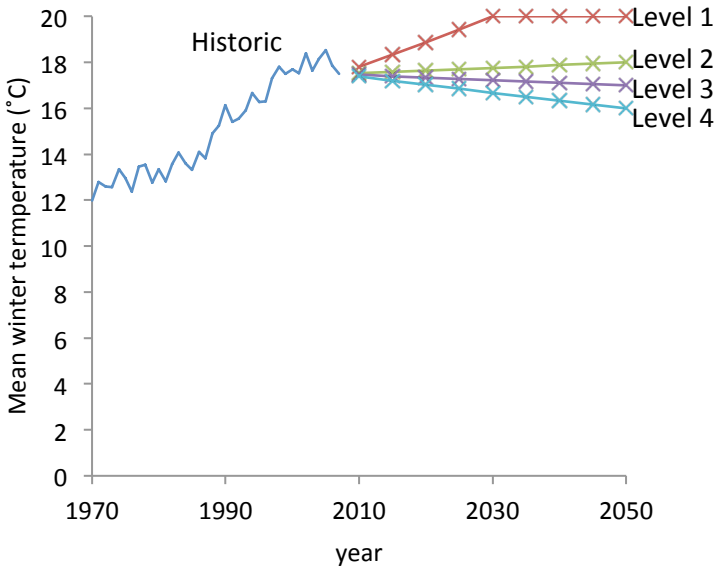

Figure 1. Historic average UK home temperatures during winter (up to 2008) and assumptions about possible futures (2010 onwards).