CIBSE TM 48 and 49 - future weather years for building simulation.

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In order to design buildings that can be adapted to cope with future climates, designers need quantitative modelling tools with which to test design options and strategies. An essential input for such models are climate data that are representative of projected future climates. Through the work leading to CIBSE TM36 *Climate change and the indoor environment: impacts and adaptation* (2005), Arup developed a technique called 'morphing' by which present-day CIBSE weather years for use with building simulation programs can be adjusted to take account of future climate change projections under the Government's UKCIP02 scenarios. Recently this method has been applied to the complete set of 14 CIBSE weather sites for the UK for both Design Summer Year (DSY) and Test Reference Year (TRY) weather years. These data are being disseminated by CIBSE and the methodological details have been reported in CIBSE TM48 *Use of climate change scenarios in building simulation: the CIBSE future weather years*.

This talk will discuss the details of the morphing method, CIBSE TM48 and the Future Weather Years, and also alternative approaches to generating future weather data. It will also discuss recent work carried out with CIBSE and the Greater London Authority to review the basis of the DSY definition and to propose an alternative approached based on a probabilistic framework. We will also discuss some of the implications of the recently released UKCP09 climate change scenarios.