Incorporating climate change into water supply management in England and Wales

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Public water supplies in England and Wales are provided by around 20 private-sector companies, heavily regulated by an economic regulator (Ofwat) and an environmental regulator (Environment Agency). As part of the regulatory process, companies are required periodically to review their investment needs to maintain safe and secure replies, and this involves an assessment of the future balance between water supply and demand. The water industry and regulators have developed an agreed set of procedures for this assessment. Climate change has been incorporated into these procedures since the late 1990s, although has been included increasingly seriously over time. In the last assessment, companies were required explicitly to plan for a defined amount of climate change, taking into account climate change uncertainty. A “medium” climate change scenario was defined, together with “wet” and “dry” extremes, based on scenarios developed from a number of climate models.

The water industry and its regulators are now gearing up to exploit the new UKCP09 probabilistic climate change projections – but these pose significant practical and conceptual challenges. This presentation outlines how the procedures for incorporating climate change into water resources planning have evolved, and explores the issues currently facing the industry.