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Dear Mr Erwin / Mr Hardy

Consultation on the Draft Climate Change Bill

Thank you for offering Water UK the opportunity to comment on the Draft Climate Change Bill consultation. Water UK is the representative body for the regulated water businesses in the UK. We are a policy-based organisation and represent the industry's interests with Government, regulators and stakeholders in the UK and in Europe.

We recognise the need for Government to take action to help the UK achieve carbon emission reductions, and welcome the consultation as a positive step in providing a cohesive long-term framework for tackling climate change.

There are, however, a number of *key points* we would like to raise in relation to the consultation:

1. We support the principle of target setting and believe this will assist in driving action to reduce the use of fossil fuels, which in turn will help mitigate our impact on climate change. We welcome the flexibility built into the target setting regime which requires the Committee on Climate Change to take into account a range of matters when proposing targets.
2. The water industry is a heavily regulated, energy intensive industry, with statutory requirements to supply water and wastewater services and to meet stringent health and environmental quality standards. It is important that the Committee is able to take such considerations into account and that it is required to consult fully and openly on proposed targets.
3. Given the very challenging level of carbon dioxide emission reductions proposed in the draft Bill, it is essential that all new European environmental legislation and associated UK Regulations, as well as existing legislation not fully implemented, are subject to a robust 'carbon impact assessment'. This would enable the Bill to be enhanced and reflect the national priority to reduce carbon emissions.
4. Emission reduction targets based on the 1990 baseline would be particularly challenging for the water sector, as EU-driven water quality directives implemented since then have already driven up the industry's carbon footprint by almost 100%. Reaching emission reductions targets based on 1990 levels will only

be possible within the water sector with a more flexible interpretation of the sewage effluent discharge consenting regime

5. The water industry has a unique opportunity to reduce carbon emissions through the development of renewable technologies such as wind, hydro and CHP. Energy can be efficiently generated and used on site, mitigating the need for transmission and maximising the energy available from renewable sources. However, the economic regulatory regime, overseen by Ofwat, is based around a five year rebasing of the sector. This results in efficiencies delivered by renewable energy investment being lost at the end of each five year period. This is far too short term if the targets included in the Bill are to be achieved and needs to be modified to ensure such schemes are economically viable.

Self generation and the purchasing of 'green energy' must be allowable as contributing towards emission reduction targets. If not, there will be very few commercially attractive opportunities for renewable energy investments. An early indication from Government that such self generation and green energy purchasing are allowable to meet emission reduction targets would encourage investment in such schemes and drive the kind of behaviour that will be needed to meet the ambitious targets set out in the draft Bill. This is particularly important for the water industry, as our ability to reduce energy consumption in the short-term is limited due to the long-life of our asset base.

6. There is currently no appropriate scheme widely available to the water industry to incentivise carbon emissions reductions through trading. The EU ETS covers only a very small percentage of the industry's activities. The proposed Carbon Reduction Commitment is aimed at non-energy intensive organisations. A sector specific agreement is needed for the water sector, embedded in our specific regulatory framework. Water UK is keen to progress discussions around the design and implementation of such an agreement with Government, regulators and others.
7. It is important that the targets discussed within the Draft Climate Change Bill are set for greenhouse gas emissions as a whole and not just carbon dioxide. A substantial proportion of emissions in the water industry are associated with methane and nitrous oxide, largely from sludge treatment and disposal processes. The inclusion of a wider basket of greenhouse gases within a target will allow companies to focus on the most cost-effective mechanisms to reduce their overall emissions and have the greatest impact on mitigating climate change. The target should therefore be a 60% reduction on greenhouse gases by 2050.
8. We support proposals to adopt a five year carbon budgeting period as well as providing a longer term view of carbon budgets going forward. We believe a 15 year budgeting period is really a minimum and would encourage a 25 year view, with regular (ideally five yearly) reviews of these targets and limits. This would assist with our own long-term investment planning.
9. There is, understandably, a focus on mitigation in the consultation document, but we think more consideration should be given to adaptation issues, as the two are closely related. We would be pleased to offer our knowledge of, experience and

expertise in understanding the many impacts of climate change and building these impacts into business planning. Adaptation is a long term challenge that cuts across many sectors and a framework is required for cross sectoral co-operation. Statutory reporting alone is not enough to drive the development of adaptive capacity and there is a need to start thinking about adaptation targets in all sectors.

Some of the key impacts of climate change on the water sector are set out in the annex to this letter, along with some of the adaptation measures we are planning or already undertaking to deal with these impacts.

10. In the RIA, the costs and carbon impacts of proposed legislation on specific sectors should be taken into account. For example, initial work within the water industry suggests that, depending on the measures proposed, the Water Framework Directive could lead to increased energy requirements in the industry of 50% or more, with similar increases in carbon emissions.

We hope these comments have been helpful and we trust they will be given due consideration in your response. If you require any further information or clarification of the comments we have made, please do not hesitate to contact me.

Yours Sincerely,

Bruce Horton
Climate Change Policy Adviser

Annex

1. Impacts of climate change on water sector

Climate change is already impacting impact on the UK water industry with respect to its operations (both water and wastewater) asset serviceability and maintenance and its long term strategic planning and investment decisions. Key impacts include:

- An increase in the intensity, severity and frequency of extreme weather events such as droughts, storms and floods
- Reduced availability of water in rivers, reservoirs and aquifers
- Less availability of water resources will also mean lower quality in some cases due to reduced dilution of pollutants
- Existing sewerage systems were not designed to take climate change into account. This means that more intense rainfall is likely to exceed the capacity of parts of the network and cause local flooding
- Water quality problems caused by run-off taking nutrients and pesticides from agricultural land and transferring them into rivers and lakes for example
- Impacts on the structure and operation of dams and reservoirs, e.g. from increased siltation and slippage
- Pipe systems for both drinking water supply and sewerage will be more prone to cracking as climate changes lead to greater soil movement, as a consequence of wetting and drying cycles
- Assets on the coast or in flood plains will be at increased risk from flooding, storm damage, coastal erosion and a rise in sea level
- Discolouration and odour problems will result from the biological consequences of higher temperatures and from more intense rainfall events
- Demand for water is very likely to increase, particularly at times of reduced availability, exacerbating supply issues
- Climate change not only has environmental and social consequences it also has financial and economic impacts. Climate change threatens the economic stability of and desirability to invest in the water sector.

2. How we are planning to deal with these impacts (adaptation)

Companies are now adapting their business and investment plans to minimise the effect of climate change on consumers. Examples include:

Strategic measures

- Assessing the impacts of climate change on all areas of asset management and operation
- Using a common set of climate change scenarios (UKCIP 02)
- Taking account of risk and uncertainty
- Managing regulator and customer expectations re levels of service
- Constructing robust asset models for future investment programming

Flooding

- Reviewing storm overflow storage and operations and sewer design standards

- Reviewing need to move or replace assets impacted by flooding and coastal realignment
- Working to agree a common methodology for dealing with the impacts of more intense and frequent rainfall events on design standards for sewers and sewer capacity
- Working with others to promote Catchment Flood Management Plans and surface water management plans for all significant urban communities
- Reducing siltation of dams

Water Quality

- Working with others to balance additional treatment and energy needs with new requirements to meet environmental and quality standards as a result of legislation, reduced dilution of wastewater effluent (particularly in low flow periods), flow and temperature changes
- Working with partners to control pollution at source and deliver multiple-benefit catchment solutions (e.g. sustainable urban drainage systems, catchment sensitive farming)
- Negotiating and influencing discharge and consent standards to be more flexible
- Dealing with odour and discolouration issues for drinking water

Water resources

- Plans to build additional infrastructure, for example winter storage capacity to capture rainfall when it is available for use when it is not
- Putting forward water recycling and re-use schemes
- Improving supply infrastructure – peak demand resilience
- Improve understanding of groundwater impacts – relocate or new abstractions
- Influencing demand through water efficiency
- Identifying need for hydrologic barriers, desalinisation, alternative sources, etc in face of sea-level rise

Other

- Building population, demographic and demand changes into future plans
- Understanding impact on agricultural outlet for biosolids
- Protecting health and safety of (outdoor) workers
- Moving emergency procedures to day-to-day business
- Implementing measures to manage increased risk of losing power and access to sites from storms

3. How we are managing our contribution to climate change (mitigation)

The water industry is energy intensive and is the third largest user of energy in the UK. It contributes to 3% of total energy use in the UK largely through pumping water and wastewater to where it is needed and in treatment to meet strict environmental and health quality standards. Achieving these standards is very energy intensive. The water industry is working with others to strike the right balance between these standards and the need to reduce energy consumption to mitigate the impacts of climate change.

The industry is responsible for approximately 4 million tonnes of greenhouse gas emissions (CO₂ equivalent) every year. This is less than 1% of total UK emissions but is rising gradually year on year. Whilst the industry is getting more efficient at abstracting, treating and supplying water and wastewater services, population and consumption growth, along with increased standards are driving energy use up.

The industry is working on ways to improve how we measure our carbon footprint – we aim to have a common accounting methodology in place soon. All companies are also producing or implementing carbon management plans that will identify opportunities for improved carbon management across the business.

In addition, the industry:

- Was one of the first to report its energy use and greenhouse gas emissions on a sector basis
- Uses renewable energy for about 14% of its energy needs, around half of which is generated on site
- Is committed to energy generation and recovery systems in waste water treatment and increasing the recycling of biosolids to land
- Has undertaken a range of energy efficiency projects and benchmarking studies of energy use across processes and companies
- Is implementing and exploring the potential for more sustainable water and wastewater treatment solutions
- Promotes the more efficient use of water through a range of activities. For example, the industry set up waterwise, a water conservation body, and Water UK is a member of the Water Saving Group
- Is working to ensure that new European legislation relating to environmental and water quality takes into account potential impacts on energy use and carbon emissions
- Is working to ensure that the full price of carbon is factored into all aspects of water industry business planning in a consistent way.