How ready is the legal and governance framework in the United Kingdom to meet the challenge of climate change?

UKELA
Better law for the environment

Sectoral summary: waste industry regulation

Q1: Is climate change expressly recognised in the legal framework for waste industry regulation?

Whilst the waste sector is highly regulated, in particular, in relation to potential greenhouse gas (GHG) emissions, presently express recognition of climate change within the legal framework for waste industry regulation is limited and, where it does exist, it is not consistent across the UK. Adaptation is largely voluntary. (Consideration of specific planning requirements is outside the remit of this summary).

The government's 25 Year Environment Plan, includes a commitment to ensure that all policies, programmes and investment decisions take into account the possible extent of climate change this century.

Since December 2019 in England an operator must undertake a climate change risk assessment for any new bespoke waste and installation environmental permit application expected to operate for more than 5 years. The requirement is to consider how extreme weather events would impact on compliance and put in place steps to minimise the impact on the environment and improve resilience and business continuity by avoiding unplanned start-ups, shutdowns and other business interruptions. It is a 2-step process, with a series of screening questions, followed by a climate change risk assessment, which forms part of an environmental management plan. Those at highest risk can have additional conditions added to their permit that require a 4-yearly review of their adaptation assessment, or other bespoke requirements. The Environment Agency has issued sector guidance covering biowaste, combustion energy from waste, hazardous waste, landfill, non hazardous waste, metals recycling, and paper, pulp and textiles.

In England, the Resources & Waste Strategy to support waste prevention activities is supplemented by the Waste Prevention Programme, which sets out a three-pronged strategy focused on improved product design, better systems and services, and data access:

- eliminating all avoidable plastic waste by the end of 2042, and all avoidable waste by 2050
- targeting use of unnecessary single-use plastics
- reducing food waste

The strategy contains five ambitions including eliminating food waste to landfill, doubling resource productivity and ensuring all plastic packaging placed on the market is recyclable, reusable or compostable.

It also announced three reforms to the waste system in England; the introduction of a deposit return scheme for drinks containers, extended producer responsibility for packaging, and consistency in household and business recycling collections.

The Environment Act 2021 includes extended producer responsibility provisions to cover the full net costs of managing products at the end of life.

Scotland
In Making things last: A Circular Economy Strategy for Scotland (2016) it was noted that as landfill continues to decrease, the Scottish Government, "would like to see a managed retreat from landfill with the number of active sites reducing and sites closing in accordance with permit requirements, ensuring necessary aftercare so that environmental protection remains a priority, including minimising climate change impacts."

The Scottish Government's Programme for Government 2021/22 refers to working in collaboration with industry, local government and environmental groups to develop a route map to achieving targets to 2025 and beyond, and consideration of the role of incineration and fiscal incentives. It explores the use of Scotland's devolved tax powers over Landfill Tax to ensure they are consistent with emissions reduction targets, and a Circular Economy Bill, to develop an economy with reduced demand for raw materials, designs products to last as long as possible and encourages reuse, repair and recycling.

Q2: What are the main issues arising from climate change for the sector?

GHG emissions are associated with the generation of materials and products which may ultimately be disposed as waste, alongside the movement and treatment of the waste. In addition, operations and installations will also be impacted by climate change risk including flooding, soil and coastal erosion and heat impacts. In 2018, waste was reportedly attributable to around 5% of UK GHG emissions, with methane accounting for 92% of those emissions. In its review of 2020, the Environment Agency stated that since 2010 emissions of GHG from the sites they regulate under the Environmental Permitting Regulations have decreased by 50%. In the same period methane emissions from the sites have decreased by 45%.

In 2021 the Environment Agency's third adaptation report to Defra identifies a number of possible physical risks to waste facilities as a result of climate change: "Landfill caps losing integrity during heatwaves, erosion makes land and landfill restoration difficult; more pollution incidents from permitted sites due to flooding, extreme rainfall/ wet weather, coastal inundation, wind damage, low flows, waste fires or reduced efficiencies (e.g anaerobic digesters). Also, indirectly due to runoff from firewater/ fire prevention measures or failure of pollution control systems due to weather or flooding impacts. Increases demand on incident response with associated staff time and costs.

Northern Ireland's second Climate Change Adaptation Programme (2019-2024) notes the supply of electricity, for example, is crucial for pumping sewage to wastewater treatment works and if the supply of electricity fails untreated sewage can cause human health issues and environmental pollution. A positive impact of higher temperatures and dry weather may be the improvement of wastewater treatment as lower flows will allow longer retention of sewage in settlement tanks, reducing the loading on further treatment stages. However, the combination of dry, warm weather could reduce river flows and increase the influence of treated wastewater to the waterway which may require wastewater to undergo higher levels of treatment.

In 2021 the Committee on Climate Change recommended a ban on sending organic waste to landfill from 2025 and the government has committed to eliminating food waste to landfill by 2030. For this to be effective, the waste sector will have to see widespread infrastructure investment to ensure the capacity exists to collect and recycle the organic waste. There will also need to be behaviour change initiatives to encourage consumers to recycle their organic waste.

Recently, the Welsh Government announced their intention to enforce a moratorium on the consenting of all large incineration facilities. For EfW facilities more generally there are proposals to require Carbon Capture Usage and Storage (CCUS).

For many years throughout the UK the waste hierarchy has required waste producers to take measures to prevent waste and reuse materials where waste is generated in order of the requirement to reduce, recycle, recover or dispose. In more recent years, the UK and devolved governments have committed to moving towards a circular economy where less resources are productively used repeatedly and as little waste as possible is generated. The prevention and reduction of waste though design and fiscal incentives are expected to reduce GHG emissions.

Q3: What initiatives are taking place within the sector to further the goal of achieving Net Zero and how might other sectors learn from that?

A number of initiatives are being led both by private actors and a range of stakeholders. Private enterprises are setting science-based emission reduction targets as approved by the Science Based Targets Initiative and many are considering how to become net negative in terms of GHG emissions.

The Environmental Services Association (ESA) launched a net zero strategy for the UK recycling and waste sector in June 2021. The three key priorities for decarbonising the sector are:

1. investing a forecasted £10bn in recycling infrastructure over the next decade to make the recycling process more efficient, reduce associated emissions, meet the government's 65% municipal recycling target and create 40,000 permanent jobs
2. decarbonising non-recyclable waste treatment by removing organics from landfill by 2030 and plastics from energy recovery facilities, while working with government to enable carbon capture, utilisation and storage (CCUS) technology to mitigate remaining emissions
3. transitioning vehicles and fuel use to zero emission sources

The Courtauld Commitment spearheaded by WRAP is a voluntary agreement across the UK food chain to deliver lower food waste and GHG emissions while sourcing water sustainably. Between 2015 and 2018, there has been a 7% reduction in food and drink waste, post farm gate. WRAP run numerous campaigns to try to change consumer behaviour including "Love Food Hate Waste".

Knowhow gained from many of the above initiatives in terms of target setting, monitoring and strategic application could be shared with other sectors particularly regarding the use of new technology. As the waste sector is dealing with embedded emissions from other sectors such as construction, industry, healthcare, chemicals, food and drink and other consumer products, knowledge of the pinch points within the waste management processes could be shared with those sectors to aid understand and inform emissions reductions higher up the value chain.

Q4: What initiatives are taking place within the sector to adapt to climate change and how might other sectors learn from that?

Learnings achieved from the climate change risk assessment conducted for certain waste operations and installations' permits may be of value for elsewhere in the UK and other sectors.

Government funded organisations like WRAP and Zero Waste Scotland have a number of initiatives regarding monitoring, reduction, reporting of waste and the transformation of the linear economy into a circular one.

Q5: Is the regime effective in light of future challenges?

The Committee on Climate Change has identified that although legal and policy changes are occurring within the waste sector, the delivery timelines are much too slow, and the sector is not currently on target.

Q6: What are the top additional interventions (of any kind) that would improve the legal and governance framework in the sector?

1. the Committee on Climate Change has identified in their 2021 report, Progress in Reducing Emissions, several actions which should be a priority for the government. These include raising recycling targets to at least 68% by 2030, sending a policy signal to ban biodegradable waste streams from landfill from 2025 and accelerating the delivery of Extended Responsibility Schemes. The UK Net Zero Strategy (NZS) launched on 19 October 2021 commits to the elimination of landfill of biodegradable waste for municipal waste by 2028 rather than 2025 for municipal and industrial/commercial waste
2. the Committee's independent review of the NZS notes that:
    - the Government has not yet put forward plans for a Net Zero Test, as recommended, to ensure that all policy and planning decisions are consistent with the path to Net Zero
    - one important area to be resolved is "setting out a clear plan to deal with rising Energy from Waste (EfW) emissions, including stating capacity and utilisation requirements of EfW consistent with recycling and waste prevention aims, and consulting on an EfW emissions tax (possibly as part of the UK Emissions Trading Scheme)"

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