

SLAUGHTER AND MAY /

Sustainability
first

NOTES ON SUSTAINABILITY, LAW AND REGULATION IN THE UTILITIES SECTOR

December 2020

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**These notes are produced for the sole benefit of Sustainability First.
They may not be relied upon by any other person.**

Preface from Sustainability First

Sustainability First are delighted that Slaughter and May have been doing some pro bono work for us on sustainability, law and regulation in the utilities sector. This forms a part of our Fair for the Future Project.

Slaughter and May have produced a number of notes setting out the ‘as is’ legal and regulatory background in terms of sustainability in selected utilities. These notes will be one of the various elements that will feed into Sustainability First’s work early next year on the implications of the public purpose agenda in utilities for regulators and policy makers.

The notes, which have been produced by Slaughter and May with the benefit of input from Sustainability First and relevant sector experts where helpful, are as follows:

- Definitional note: definition of sustainability in public utilities for the purposes of this project. This note has been prepared to provide a framework for assessing sustainability, law and regulation in given sectors;
- Water sector note: an overview of the legal and regulatory approach to sustainability issues in the water sector;
- Energy sector note: an overview of the legal and regulatory approach to sustainability issues in the energy sector; and
- Telecoms sector note: a higher-level overview highlighting the key differences in approaches to sustainability issues between the water and energy sector on the one hand and the telecoms sector on the other hand.

We are grateful to the Fair for the Future sponsor organisations who have offered invaluable comments on early drafts.

Inevitably, the three sector notes have taken somewhat different approaches. The water note, which was drafted first, is the most detailed, in large part because this sector is the most homogeneous. Common issues between the sectors are not repeated in the two later notes. The telecoms note is relatively ‘light touch’ given the extent of diversity and pace of change.

As the notes themselves make clear, they should not be taken as formal legal advice. And the notes do not intend to draw policy or regulatory conclusions. Slaughter and May have also not participated in, or been consulted on, the wider aspects of the project, nor on any conclusions that Sustainability First may reach which are outside the scope of their work. These caveats are particularly important given the CMA appeals in water and the RIIO2 process in energy.

What the notes do give is an unprecedentedly rich and easily accessible source material for the legal and regulatory backdrop to these important issues.

Sustainability First
December 2020

Definition of
sustainability in the law
and regulation of the
utilities sector



1. INTRODUCTION

- 1.1 The concept of sustainability is a complex issue that can be approached in different ways. This note sets out a summary of the sustainability issues that are thought most likely to be relevant in the utilities sector.
- 1.2 This summary therefore should not be seen as an attempt to provide a comprehensive definition of sustainability, but rather as intended to establish a framework that identifies the most important aspects of sustainability in the context of the utilities sector. The immediate purpose is to enable a sector-specific analysis, on the interaction between sustainability, law and regulation in selected utility industries, to be carried out in a systematic manner across different industries.
- 1.3 The views expressed in this note are those of Slaughter and May alone, and do not necessarily reflect the position of Slaughter and May's clients or any other person. Slaughter and May's involvement in Sustainability First's project is limited to the provision of advice on the legal context and background to specific issues. We have not participated in, or been consulted on, the wider aspects of the project, nor on any conclusions that Sustainability First may reach which are outside the scope of our work.
- 1.4 This note is for general information only and is not intended to offer policy or legal advice, or recommend any course of action, and it may not be relied on by any person other than Sustainability First. To the extent permitted under applicable law or regulation, Slaughter and May excludes all liability (howsoever caused) to anyone other than Sustainability First for any loss or damage relating to the use of this note. Nothing in this note nor the delivery of it to anyone other than Sustainability First shall create or constitute a solicitor-client (or any other fiduciary) relationship between Slaughter and May and a third party.

2. WHAT DO WE MEAN BY THE UTILITIES SECTOR?

- 2.1 The "utilities sector" for present purposes means the provision of basic and essential services involving large-scale infrastructure. The industries that are the primary focus of this note are water, sewerage, gas and electricity, but its contents may also have application in other utilities sectors such as post, fixed and mobile telecommunications and rail.

3. WHAT IS SUSTAINABILITY?

- 3.1 The term "sustainability" is capable of a range of interpretations. Narrowly, it can be used to mean "sustainable use of natural resources, especially carbon-based fuels". At its broadest it can encompass sustainable practices in a wide range of contexts, taking into account broader political, economic, social and technological considerations, and looking not only to sustainability in the status quo but also resilience to shocks - which is particularly pertinent in the current COVID-19 crisis.

This broader approach can be seen, for example, in the United Nations' Sustainable Development Goals, which cover issues as diverse as poverty and gender equality, economic growth and innovation, health and education, and peace and justice.

3.2 The narrow definition excludes from its scope sustainable approaches to issues that are not directly related to the use of material goods: for instance, the implications of intergenerational cost-sharing for major infrastructure. The UN's broad definition arguably covers practically every area of human endeavour.

3.3 The Brundtland definition, first proposed in 1987 and subsequently endorsed by the UN General Assembly, conveys the essence of sustainability through a more targeted definition:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- (i) The concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and*
- (ii) The idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs.”¹*

3.4 This definition remains widely used today, although the Government's definitions have tended to take a broader approach, including these principles and expanding on them:²

- (i) The 2005 Sustainable Development Strategy defines five shared UK principles to be “used to achieve our sustainable development purpose”: (i) living within environmental limits; (ii) ensuring a strong, healthy and just society; (iii) achieving a sustainable economy; (iv) promoting good governance; and (v) using sound science responsibly. These are distilled further, into four “shared priorities for UK action”: sustainable consumption and production, climate change and energy, natural resource protection and environmental enhancement, and sustainable communities.³
- (ii) The 2011 DEFRA paper on mainstreaming sustainable development offers nine concrete aspects to its vision for sustainable development: (i) sustainable development in Government; (ii) green economy; (iii) action to tackle climate change; (iv) protecting and enhancing the natural environment; (v) fairness and improving wellbeing; (vi) national and international sustainable development; (vii) building a big society; (viii) business planning, operations

¹ The Brundtland report was commissioned by the UN to consider strategies to achieve long-term sustainable development. This definition can be found here: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>, chapter 2.

² This highlights two Government definitions of sustainability, but there are several: e.g. <http://researchbriefings.files.parliament.uk/documents/POST-PN-408/POST-PN-408.pdf>, <https://www.gov.uk/government/publications/sustainability-plan/sustainability-plan>, <https://www.parliament.uk/documents/post/pn091.pdf>.

³ See: <https://sustainabledevelopment.un.org/content/documents/1408uk.pdf>.

and procurement commitments; and (ix) transparency and public accountability.⁴

- 3.5 However, each of these definitions is tailored to its purpose (i.e. setting out an overall sustainability strategy for the Government), and are not specifically targeted at analysing sustainability issues in the utilities sector. Some recent examples of utility-specific sustainability definitions include:
- (i) The “sustainable energy sector” definition in the RIIO-2 Framework Decision which refers to a sector that “promotes security of supply over time; delivers a low-carbon economy and associated environmental targets; and delivers related social objectives (e.g. fuel poverty targets).”⁵
 - (ii) The focus on the environment and long-term sustainability in Ofwat’s final methodology for the 2019 Price Review. Specifically, Ofwat notes how “water companies should consider the wider costs and benefits to the economy, society and the environment, including the sustainability of natural capital.”⁶
- 3.6 The approach taken in this note is to consider sustainability in the utilities sector by reference to the achievement of good social, environmental and economic outcomes, based on a discussion of practical priorities and with a view to facilitating analysis of the sector. It addresses this in six contexts: management of long-term intergenerational issues; people-centred services and localism; preserving the environment/reducing emissions; allowing short-term flexibility; ensuring investment in innovation; and achieving collaboration. These issues are addressed in greater detail below and can be split into two categories: (i) substantive sustainability goals that the utilities sector should aim to achieve; and (ii) vehicles or means for achieving greater sustainability.
- 3.7 There is significant interplay between these factors: for instance, decarbonisation and climate change adaptation are essential to environment and emissions but also can involve long-term projects that raise significant issues around intergenerational equity. The complex relationship between these factors is noted, but for the purposes of simplicity and clarity, in this summary each issue is addressed in only one section.
- 3.8 A pervasive issue in sustainability in the utilities sector is the balance between consumer welfare (which is generally the focus of the existing regimes) and the welfare of citizens and communities more broadly. This touches on all aspects of sustainability - a focus on (current) consumers tends to direct utilities towards short-term impacts, and a focus on the interests of bill payers, to the potential exclusion of considerations relevant to other citizens and communities as a whole. By contrast, a citizen focus is more likely to put stewardship, long-term interests and cooperation to the fore.

⁴ See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/183409/mainstreaming-sustainable-development.pdf.

⁵ See: https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf.

⁶ See: <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Final-methodology-1.pdf>.

- 3.9 Finally, we note that the varying roles and responsibilities of the different stakeholders can impact on how those parties define sustainability. This divergence could be seen as positive since it could prevent the duplication of efforts as each party addresses sustainability in the way that it is best suited to help. However, it is also important that stakeholders collaborate to avoid working at cross-purposes to each other.

Substantive sustainability goals

Long-term intergenerational issues

- 3.10 Long-term intergenerational issues can arise in a number of different contexts. They include the fairness/justice, resilience, and stewardship/resource management-related aspects of the relationship between: (i) current and future generations; and (ii) the young and the old at any one time. In particular, there can be incentive problems and related obstacles in carrying out long-term investments, either because the benefits are too distant or uncertain and in any case might not be enjoyed by the universe of consumers that will be paying now, or because there may be incentives to hold down costs for current customers at the expense of future customers. These issues may be exacerbated by demands for consistent profitability and frequent reporting, which may incentivise private enterprise (especially publicly-traded companies) towards a short-term focus.
- 3.11 The issues to consider here include how to achieve an equitable balance between these competing interests, how to give due weight to very long-term interests - e.g. where the likely beneficiaries are future generations whose interests are not directly represented in the political process - and how to encourage precautions against rare and high impact events, where expenditure must be incurred today to protect against an event that may not happen for a very long time.⁷

People centred services and localism

- 3.12 An important aspect of sustainability has to do with the relationship between people and regulated industries, especially people in vulnerable situations. This may be a particular issue where a utility operates as a monopoly in a given area, and therefore has a much greater capacity than most economic actors to impact on the local environment. Conversely, though, businesses that are focused in a particular geography may also be better placed to understand - and therefore address - local market circumstances and concerns. There are circumstances where large-scale, national coordination is necessary and appropriate. However, sustainable and inclusive regulatory regimes can help to enable and empower people to voice their preferences in relation to the essential services being provided to them and the social and environmental impacts that they may have, as well as to voice concerns or call attention to specific problems with the service provision.
- 3.13 Relatedly, sustainability in regulatory regimes may mean having the capability to enable a diversity of business models, including where appropriate local, alternative,

⁷ The importance and difficulties of justifying this kind of long-term investment is brought into keen focus by the current COVID-19 pandemic. Proper preparation for this kind of event is very costly and difficult to justify in ordinary times, as investment provides no current benefit and only distant and uncertain future benefit. Such preparation is nonetheless essential to long-term sustainability.

non-profit and public benefit oriented utilities. These entities may be more decentralised and accessible to consumers and, for this reason, may over time be more likely to offer services that effectively reflect preferences and concerns voiced by consumers.

- 3.14 It is arguably possible to broaden the scope of localism and people-centrism, from “consumers” - which both excludes some people and focuses on people in their capacity as buyers or economic actors - to “citizens” or indeed “humans”. There are some aspects of people’s interaction with the utilities sector that cannot be properly understood without reference to the totality of people’s existence outside of strict economic relations. For instance, serving the economic interests of consumers in a certain area may disproportionately affect environmental amenity for the community.
- 3.15 It is worth noting that sustainability is increasingly receiving attention at the local/community level, for example in the form of declarations of climate emergencies by local authorities⁸ and the definition of clean air or low emission zones in cities. This is leading to stronger engagement between regional and local authorities and regulated entities, which may have major impacts on the sustainability agenda. A key question is how these local/regional developments can be reconciled with national policy developments (e.g. how central Government funds should be allocated between local and national action, and whether local authorities should use their own revenue-raising powers and borrowing to achieve sustainability goals).

Environment and emissions

- 3.16 The most common understanding of sustainability is using natural resources in a manner that is sustainable over the long term. This includes minimising consumption and maximising recycling of natural resources, minimising the negative environmental externalities of exploitation of natural resources, and taking account of ecosystem impacts. These should be considered from the perspective of society as a whole and not just from the perspective of consumers.
- 3.17 The utilities sector, and especially the energy industry, is responsible for a significant part of the UK’s use of natural resources and its carbon emissions. It is therefore uniquely well-placed to contribute to increasing the environmental sustainability of the economy as a whole, and carries a significant responsibility to minimise the environmental impacts and costs of its activities to society and the environment.
- 3.18 Issues to consider in this context include whether the regulatory regime and company law may stand in the way of progress towards environmental sustainability. For example, it may subordinate environmental concerns to shareholder and consumer concerns in company decision-making. On the other hand, the regime can also support progress, e.g. by embedding sustainability metrics into price controls through a focus on outputs or outcomes.

⁸ For a full list, see <https://www.climateemergency.uk/blog/list-of-councils/>.

Ways of achieving greater sustainability

Short-term flexibility

- 3.19 Effective and desirable regulatory regimes are those in which changes to the business practices of regulated businesses can occur quickly in response to changing circumstances. For example, fast-paced innovation, the emergence of new scientific evidence, “game-changing” technologies, changed public expectations (a shift in the terms of the “social licence to operate”), and political circumstances or managerial innovations all have the potential to reduce prices, increase quality, or put pressure on the system. It is important, if these developments are to take place on a timely basis, that there is regulatory adaptability and, when appropriate, scope for prompt regulatory change to ensure that the costs and benefits of such changes are shared equitably across society.
- 3.20 Relevant considerations in this context include whether and how the value of a given innovation is identified and acknowledged (this could raise legal issues if, for example, innovations are protected by intellectual property rights), but also the extent to which there is scope within price control regimes for companies to innovate and make changes in the way that they operate.

Investment in innovation

- 3.21 Technological innovation has been a major driver of economic growth across the global economy for centuries. It has revolutionised ways of doing business, and continues to create new possibilities across all sectors. It will continue to reshape all aspects of human activity for some time to come, and has the potential to make industry radically more sustainable, e.g. by increasing efficiency and reducing energy usage. It is also capable of having the opposite effect, as technology creates new demand for energy and other resources.
- 3.22 There is also a wider category of organisational, institutional and commercial innovation, which seeks to create new and better processes and structures for business. This also has the potential to increase sustainability, e.g. by making tariff structures fairer and by facilitating collaboration. For these reasons, encouraging both technological and organisational innovation is essential to future advances in sustainability.
- 3.23 A key issue in the utilities sectors is likely to be getting the balance right between incentives and pressures to innovate and other requirements such as health and safety and price control constraints, which might create incentives for a more conservative, prudential and risk-averse culture. These countervailing incentives are not necessarily adverse to a sustainability agenda (for example, where they focus on ensuring affordability of services for diverse communities). However, an overly risk-averse culture (whether within regulators, regulated businesses or both), or one where the consequences of failure are disproportionate to the potential benefits of success, could suppress useful and justifiable investment in innovation.

- 3.24 Relevant considerations in this context could include the extent to which there are opportunities to promote sustainability in the utilities sectors through investment in innovation, specifically by:
- (i) finding ways to allow, encourage, and facilitate funding of experimental and speculative R&D and innovation, even where the risks of failure are major and the investment runs a serious risk of coming to nothing, or where collaboration may be needed amongst a wider group of actors;
 - (ii) creating the right culture for innovation and accepting failures as a necessary part of the process; and
 - (iii) encouraging investment in non-technology related issues, especially in process, commercial and institutional innovation. Innovation outside of the fixed asset base could be particularly important for delivering social and environmental outcomes.
- 3.25 This set of issues is particularly a potential obstacle to transformative innovation and to large-scale implementation - experimentation with incremental innovation and small-scale pilots is less likely to be inhibited - and so the focus here may be on the progression from an innovation to broad acceptance and scaling.

Collaboration

- 3.26 Utilities sectors typically operate on a network basis, and collaboration between operators, even where they are engaging in monopoly or near-monopoly activities, can be an important part of the process of innovation and network development. In addition there may also be opportunities for collaboration between operators at different levels of the supply chain.
- 3.27 Typically, companies will look to collaborate on projects that because of their size, complexity, or the nature of the likely solution, are difficult for a single organisation to pursue on its own. However, regulation and antitrust law may in some cases be seen to stand in the way of joint endeavours, either because of concerns about the legality of collaboration or because there are (real or perceived) obstacles to the satisfactory allocation of costs and benefits. In particular, the potentially grave consequences of antitrust investigations could lead to an aversion to collaboration with competitors, even where it is likely to be beneficial and is actually permitted by antitrust law. Facilitating proper collaboration is likely to allow for faster innovation, and may give rise to other avenues for improving sustainability.
- 3.28 There are some existing institutional efforts to achieve industry-wide collaboration - e.g. Water UK's sector-wide innovation strategy in 2020⁹ - but an area for consideration is whether there are limitations on either the financial scale or the scope of these projects, and whether in addition to funding there are behavioural factors that might be used to provide a stronger encouragement to collaboration.

⁹ See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/Time-to-act-now-driving-transformational-innovation-in-the-sector-decision-document.pdf>.

Legal and regulatory
aspects of sustainability
in the water industry



1. INTRODUCTION

- 1.1 Sustainability First has asked Slaughter and May to consider the interaction between sustainability, law and regulation in different utilities industries. This note considers these themes with respect to the water industry, focusing primarily on England and Wales, and on Water Only Companies (“WOCs”) and Water and Sewerage Companies (“WASCs” and, together with WOCs, “water undertakers”), as well as Water Supply and Sewerage Licensees (“WSSLs”), self-supply licensees and infrastructure provider project licensees (all of which are referred to together in this document as “water companies”).¹ It should be read in conjunction with Slaughter and May’s note summarising the sustainability issues that are thought most likely to be relevant in the utilities sector (the “definitional note”).
- 1.2 Specifically, this note considers the relevant legal and regulatory frameworks and the extent to which they facilitate - or make more difficult - the adoption of sustainability-enhancing behaviour in the water industry. It is focused, therefore, on identifying any limitations on what can be done within those frameworks, and is not intended to draw conclusions as to what should be done. This note therefore does not analyse:
- (i) the adequacy or quality of current sustainability-enhancing efforts by the Water Services Regulation Authority (“Ofwat”) and companies active in the industry, although it does make reference to the interaction between those efforts and the regulatory regime;
 - (ii) the incentives or disincentives that may exist outside of the legal and regulatory regime and may encourage or discourage sustainability initiatives, e.g. political/peer pressure or shareholder/customer expectations; or
 - (iii) the implications for sustainability considerations of the interaction between the water industry and the planning regime, land access rights, and construction and health-related legislation.
- 1.3 This note has been written during the COVID-19 crisis, which clearly may act as a catalyst for change throughout the economy, including the water industry. Pressure for change (whether or not related to sustainability) may also come from other areas, such as Brexit. We have not sought to analyse the likely impact of these factors in any detail as part of this note, but we note that the regulatory context could undergo significant changes, e.g. as a result of divergence between the UK and Europe on the future of carbon pricing or more generally on the regulation of utilities, a persistent pandemic-induced recession that reduces people’s ability to pay bills, or a Government economic stimulus that takes the form of investment in sustainable infrastructure.²

¹ For our perspective on these themes in respect of the energy industry, see our note titled “Legal and Regulatory Aspects of Sustainability in the Energy Industry” (the “energy note”).

² For example, the Committee on Climate Change urges the Government to ensure that the UK’s coronavirus recovery has a green focus and other experts have petitioned for the Government to “green” the economic recovery. See <https://www.theccc.org.uk/wp-content/uploads/2020/06/Reducing-UK-emissions-Progress-Report-to-Parliament-Committee-on-Cli...-002-1.pdf> and

- 1.4 Section 2 of this note gives an overview of the structure of regulation of the water industry. Section 3 considers how the current regulatory framework allows for sustainability (as interpreted in the definitional note), while section 4 identifies changes that could be made to further sustainability goals. A reader who is already familiar with the structure of the regulatory regime may wish to proceed straight to section 3, and refer back as necessary to the relevant parts of section 2.
- 1.5 The views expressed in this note are those of Slaughter and May alone, and do not necessarily reflect the position of Slaughter and May’s clients or any other person. Slaughter and May’s involvement in Sustainability First’s project is limited to the provision of advice on the legal context and background to specific issues. We have not participated in, or been consulted on, the wider aspects of the project, nor on any conclusions that Sustainability First may reach, which are outside the scope of our work. Slaughter and May has not reviewed any documents published after Ofwat’s forward programme 2020-21 in March 2020.
- 1.6 This note is for general information only and is not intended to offer policy or legal advice, or recommend any course of action, and it may not be relied on by any person other than Sustainability First. To the extent permitted under applicable law or regulation, Slaughter and May excludes all liability (howsoever caused) to anyone other than Sustainability First for any loss or damage relating to the use of this note. Nothing in this note nor the delivery of it to anyone other than Sustainability First shall create or constitute a solicitor-client (or any other fiduciary) relationship between Slaughter and May and a third party.

2. SUMMARY OF THE REGULATORY REGIME FOR WATER

Institutions involved in water regulation

- 2.1 At the highest level, the UK Department for Environment, Food and Rural Affairs (“DEFRA”) sets the wider water and wastewater policy framework in England. DEFRA also fulfils a quasi-regulatory role in certain respects, such as in its capacity as the body with the power to grant drought orders and emergency drought orders under the Water Resources Act 1991 (“WRA”). The Governments of Wales and Scotland and the Department of Agriculture, Environment and Rural Affairs in Northern Ireland have policy-setting responsibility for their respective territories.³ The European Union (“EU”) also currently has responsibility for setting standards for water, wastewater and the environment but responsibility for implementation rests with national governments/bodies.⁴
- 2.2 Ofwat is the economic regulator of the water industry in England and Wales established under the Water Industry Act 1991 (“WIA”). Its role includes: (i) setting

<https://www.theguardian.com/environment/2020/mar/24/covid-19-economic-rescue-plans-must-be-green-say-environmentalists>.

- ³ These policy-setting responsibilities in Wales do not extend to the appointment and regulation of water or sewerage undertakers whose area is not wholly or mainly within Wales or the licensing and regulation of any licensed water supplier (except where the supplier’s services are wholly limited to Wales).
- ⁴ Note that once the Brexit transitional period ends on 31 December 2020, the UK will not be bound by EU standards, except pursuant to national law and any post-Brexit agreement with the EU.

its own vision, strategy and regulatory priorities within the strategic policy framework set by DEFRA; (ii) publishing a forward-looking work programme on its strategic priorities for the water industry;⁵ (iii) setting price controls for water and sewerage companies; (iv) issuing licences for the supply of water;⁶ and (v) ensuring compliance with relevant law and regulation, including competition law, through its enforcement powers. It follows from this that Ofwat - in common with other economic regulators in England and Wales - occupies a somewhat nuanced position in that (in some scenarios) it acts as the rule maker, the investigator of alleged breaches of the rules, and also as the primary decision-maker on whether a company has breached its obligations.

- 2.3 In both Scotland and Northern Ireland, the devolved Governments take responsibility for water matters. The analogous regulator to Ofwat in Scotland is the Water Industry Commission for Scotland and in Northern Ireland is the Utility Regulator.
- 2.4 A range of other bodies also have discrete responsibilities within the industry. Specifically: (i) the Environment Agency (“EA”) and Natural Resources Wales regulate the water industry from an environmental perspective, and are responsible (under the Flood and Water Management Act 2010) for maintaining and applying a national strategy for managing flood and coastal erosion risks in England and Wales; (ii) the Drinking Water Inspectorate (“DWI”) regulates it from a quality perspective; and (iii) the Consumer Council for Water and Natural England formally represent consumers and the interests of the natural environment.⁷ In Northern Ireland, regulatory roles are fulfilled by the Utilities Regulator, the Consumer Council, the Northern Ireland Environment Agency, the Drinking Water Inspectorate of Northern Ireland, and the Department of Infrastructure. In Scotland, the main regulators are the Water Industry Commission, the Scottish Environment Protection Agency and the Drinking Water Quality Regulator.
- 2.5 *Drinking water quality.* The DWI has various powers where an event is likely to affect drinking water quality or sufficiency of supplies, and where there may be a risk to consumers' health. These powers include an ability to prosecute water companies where there is evidence that the event is a result of an offence committed by the water company and the company does not have a defence that it took all reasonable steps and exercised all due diligence. The DWI undertook two such prosecutions in 2019: (i) Northumbrian Water Ltd was fined £499,725 plus costs for offences relating to the South Moor service reservoir taste and odour;⁸ and (ii) Thames Water was fined a total of £160,000 plus costs for offences relating to the Coppermills water treatment works.⁹

⁵ See Ofwat’s forward programme for 2020/2021 at: <https://www.ofwat.gov.uk/wp-content/uploads/2020/03/Ofwat-Forward-Programme-2020-21.pdf>.

⁶ See: <https://www.ofwat.gov.uk/regulated-companies/ofwat-industry-overview/licences/>.

⁷ Consumer interests are also represented through company-based Customer Challenge Groups and Customer Scrutiny Panels in England and Wales (see <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Final-methodology-1.pdf>) and the Customer Forum in Scotland (see <https://www.customerforum.org.uk/about-us/>).

⁸ See: http://dwi.defra.gov.uk/press-media/press-releases/20190110_NWL_South_Moor.pdf.

⁹ See: http://dwi.defra.gov.uk/press-media/press-releases/20190610_TMS_Coppermills.pdf.

- 2.6 *Environment Agency criminal prosecutions.* The EA has the power to prosecute water companies (and their directors in certain circumstances) for a variety of environmental offences, including under WIA and WRA. For example, the EA has started a criminal investigation into Southern Water in relation to thousands of alleged pollution spills over a number of years and the falsification of data related to this.¹⁰
- 2.7 The remainder of this section focuses on England and Wales only - it does not cover water industry regulation in the rest of the UK.

The Secretary of State's and Ofwat's statutory functions

- 2.8 The Secretary of State's and Ofwat's duties are set out in section 2 WIA. Their principal duties are to:
- (i) "further the consumer objective", i.e. to protect the interests of consumers, including the disabled, chronically sick, elderly, those with low incomes, those living in rural areas, and private households generally;
 - (ii) secure that water companies carry out their duties and functions;
 - (iii) secure that water companies are able to finance themselves; and
 - (iv) secure long-term resilience of water supply, taking account of environmental pressures, population growth and changes in consumer behaviour, and promoting long-term planning, investment, sustainability, efficiency and demand reduction. This "resilience" objective was inserted into Ofwat's statutory objectives by the Water Act 2014.
- 2.9 Subject to these duties, they are also required to act to:
- (i) promote economy and efficiency in the industry;
 - (ii) ensure non-discrimination;
 - (iii) ensure that consumer rights are protected, especially with regard to land transactions and non-water related activities of water companies; and
 - (iv) contribute to the achievement of sustainable development.¹¹
- 2.10 They are further required to have regard to the principles of best regulatory practice, including transparency, accountability and proportionality.
- 2.11 Ofwat is also required to act in accordance with the statutory strategic policy statements published by DEFRA and the Welsh Government under section 2A WIA.

¹⁰ In June 2019 Ofwat imposed regulatory enforcement penalties of £126 million on Southern Water for the same events. See: <https://www.gov.uk/government/news/ofwat-announces-126-million-penalty-for-southern-water>.

¹¹ WIA section 2.

DEFRA's most recent strategic policy statement for Ofwat, published in 2017, focuses on long-term resilience, protecting customers and promoting competition.

- 2.12 Section 3 WIA imposes obligations on Ofwat, the Secretary of State and relevant water undertakers to comply with several wide-ranging general environmental and recreational requirements when formulating or considering any proposals relating to any functions of a relevant water undertaker. For example, these include an obligation (where possible) to exercise any power with respect to the proposals in a way that furthers the conservation and enhancement of natural beauty.

Sources of duties on water companies

- 2.13 The main source of obligations on a water company, other than obligations set out directly in legislation, is the instrument of appointment or licence that sets out its authorisation to provide services. The Secretary of State issued the original instruments of appointment to water undertakers, which set out the scope and terms of their appointments in detail, although Ofwat has been authorised since 1994 to make such appointments (and any amendments to appointments) on the Secretary of State's behalf.¹² In addition, Ofwat issues water supply and sewerage licences, self-supply licences and infrastructure provider project licences, all of which contain conditions imposing obligations on the licensee.
- 2.14 Ofwat then carries out five-yearly price reviews, which involve a detailed analysis of the justifiable operating and capital costs and margins of the water undertakers. This results in a price limit for each water undertaker for the next five years. Ofwat's price review for 2019 ("PR19") set wholesale price controls for water and sewerage companies for 2020 to 2025.¹³
- 2.15 Water companies are further subject to obligations imposed by environmental law, regulation and policy as described further at paragraphs 2.27 to 2.30 below.

Obligations imposed on water undertakers (i.e. WASCs and WOCs)

- 2.16 Instruments of appointment, which apply only to water undertakers, set out the geographic area for which the appointment is made to that water undertaker, and contain an extensive list of conditions, including conditions regarding the levying of charges to customers. Ofwat is attempting to standardise conditions over time, but there are some historic differences between conditions, and conditions can also be modified to reflect the circumstances of the individual appointment.
- 2.17 The obligations imposed by the conditions are on the appointee only, rather than on the appointee's whole group. However, the appointee is typically required to procure legally enforceable undertakings from its ultimate holding company (and UK holding company if the ultimate holding company is not a UK company). These undertakings essentially ensure that the group will give the appointee any information it needs to fulfil its duties and that the group will refrain from any activity that would or may

¹² Note that in practice wholly new instruments of appointment are now only likely to occur in specific contexts, e.g. reorganisations.

¹³ The PR19 final determinations for all for all water companies, issued December 2019, can be found at: <https://www.ofwat.gov.uk/publication/pr19-final-determinations-overview-of-final-determinations/>.

cause the appointee to breach any of its obligations. The holding company must also ensure that at all times the appointee has at least three independent non-executive directors who have connections with and knowledge of the appointment area and the interests of the customers in that area.¹⁴ In addition, the directors of the appointee are required to inform Ofwat if a member of the appointee's group is embarking upon an activity that may be material in relation to the appointee's ability to finance the carrying out of its functions (including the investment programme necessary to fulfil its obligations).

Obligations imposed by other licences

- 2.18 Water and sewerage supply companies that are not water undertakers are issued with a licence by Ofwat. There are three main types of licence:
- 2.19 *Water supply and sewerage licence.* WSSLs are licensed by Ofwat to supply eligible businesses, charities and public sector customers with water and wastewater. Standard licence conditions include allowing Ofwat to collect licence fees, require certain information to be made available to Ofwat where reasonably necessary, and prohibit undue preference or undue discrimination in the setting of charges.¹⁵
- 2.20 *Self-supply licence.* Ofwat licenses eligible business customers to supply themselves with water supplies or sewerage services. Standard licence conditions apply, and Ofwat ensures that applicants have the financial, technical and managerial resources necessary to supply the water and services.¹⁶
- 2.21 *Infrastructure provider project licence.* Infrastructure provider project licensees are licensed to carry out a large or complex water or wastewater infrastructure project that has been specified under the Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 (SI 2013/1582). The Thames Tideway Tunnel ("TTT") project discussed at paragraphs 3.10 to 3.14 below is, at the time of writing, the only example of this structure being used.

Obligations imposed by the price reviews - overview

- 2.22 *Price controls.* Water companies must deliver agreed outputs and levy charges to customers in a way best calculated to comply with the most recent price control determined by Ofwat for that particular company.
- 2.23 *Service and delivery outcomes.* PR19 is based on an outcomes framework, with outcomes defining the service package that each monopoly WOC and WASC in England and Wales should deliver to its customers, and its incentives for doing so.¹⁷ Ofwat stated that it expected these companies to engage with their customers on several topics when developing their business plans (which were used as a basis for the

¹⁴ This provision is not universal but is normally included where companies are subject to a change of control.

¹⁵ See: www.gov.uk/government/publications/water-supply-and-sewerage-licencing-regime-standard-licence-conditions/consolidated-version-of-water-supply-and-sewerage-licence-standard-conditions.

¹⁶ See: www.ofwat.gov.uk/regulated-companies/markets/business-retail-market/becoming-self-supply-licensee/self-supply-documents/.

¹⁷ See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Policy-summary.pdf>.

outcomes in the PR19 final determinations), including on customers' requirements for environmental outcomes and investment and on longer-term issues like resilience.¹⁸

2.24 PR19 followed PR14 in using two key tools to ensure that water undertakers deliver the right outcomes to their customers:

- (i) *performance commitments*, which set out the services that customers should receive; and
- (ii) *outcome delivery incentives*, which specify the financial consequences for companies of outperformance or underperformance against each of these commitments during the 2020-2025 price control period.

2.25 Outcome delivery incentives are set by Ofwat in each price review. Failure to meet these targets gives rise to penalties. Companies, however, have some scope to set their own commitments in their business plans, based on evidence of priorities for their customers, which can then be included in their final determinations.

2.26 *Annual performance report*. Companies must report annually on their expenditure and outcome delivery in an annual performance report ("APR"). Ofwat uses this information to check that customers are getting the price, service and investment that was agreed, and assesses the way companies report their performance against outcomes each year by rating their information quality.¹⁹ All companies must demonstrate compliance with their separate price controls and report on their expenditure and outcome delivery. It must include specific information, including financial information, disaggregated revenues and costs and a report on performance. In preparing the APR, water companies must follow Ofwat's regulatory accounting guidelines.²⁰

Obligations imposed by environmental and public health law, regulation and policy

2.27 There are four principal water company activities that are most affected by environmental and public health law and regulation:²¹

- (i) *Waste water treatment*. Although the water industry removes a large quantity of pollutants from sewage at treatment works, the treated sewage that is discharged may still cause some pollution. During heavy rainfall, dilute untreated sewage sometimes needs to be discharged into rivers and coastal waters. This causes acute pollution and increases the risk of chronic pollution. This is primarily governed by The Urban Waste Water Treatment

¹⁸ See: <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Final-methodology-1.pdf>.

¹⁹ Relatedly, companies are required to ensure the information provided to customers complies with their licence obligations (see above) and Ofwat's information principles: Accurate; Transparent; Clear; Accessible; Timely; Customer-led.

²⁰ Further detail on these is available at <https://www.ofwat.gov.uk/regulated-companies/company-obligations/annual-performance-report/>.

²¹ Environmental law and regulation includes the EU legal framework, as amended by Brexit legislation, the Environment Bill 2020 (re-introduced to Parliament on 30 January 2020) and Ofwat, EA and DWI regulation and enforcement.

(England and Wales) Regulations 1994 in England and Wales. These regulations, which implemented the Urban Waste Water Treatment Directive 1991 in England and Wales, aim to protect the environment from the adverse effects of discharges of urban waste water from public sewers and urban waste water treatment plants. They have prompted significant infrastructure projects, including the Thames Tideway Tunnel project.

- (ii) *Water abstraction.* Water companies take raw water from rivers, groundwater and storage reservoirs. This reduces water available for the natural environment, which may be problematic as low flow in streams and rivers can impact aquatic biodiversity. A further complication is that low flow in rivers can reduce the capacity of ecosystems to manage any pollution that does occur through reduced dilution, and cause damage to habitats. The abstraction licensing regime is primarily governed by WRA.
- (iii) *Water treatment.* Water companies treat ground and surface water to bring it up to drinking water quality. This is primarily regulated under The Water Supply (Water Quality) Regulations 2016.
- (iv) *Maintenance of water and waste water networks.* Reducing leakage from water pipes was a major focus from Ofwat in PR19. Leakage from the sewerage network is in some cases intentional - through storm overflows - but there are also a number of incidents where sewerage pressure leads to unplanned discharges, e.g. through manholes. These are generally regulated under WRA and broader environmental law.

2.28 In addition, there are various other aspects of environmental law that apply, both in respect of the protection of water bodies and wider environmental objectives. In many cases these require capital and operational expenditure to ensure compliance. These include The Conservation of Habitats and Species Regulations 2017, which require water companies to ensure compliance with the Habitats Directive 1992 and the Birds Directive 2009, to review the effects of their abstractions on Natura 2000 sites,²² and to discuss with the regulators how best to reduce any adverse impacts. Other obligations exist under the Bathing Water Directive 2006 and the wider European law, including the Water Framework Directive 2000 which requires a “good” status to be achieved across various criteria.

2.29 The DWI’s enforcement powers and approach in respect of public health have been mentioned at paragraph 2.5 above and also extend to criminal sanctions.

2.30 Other key relevant aspects of environmental law and policy include:

- (i) *Water Industry National Environment Programme.* The EA’s Water Industry National Environment Programme (“**WINEP**”) is a set of actions that all water companies operating in England must complete in order to meet their environmental obligations. The latest WINEP (which was released in 2018 and covers the 2020-2025 period) will result in up to £5 billion in investment by water companies in the natural environment during that period. WINEP sets

²² Natura 2000 is an EU network of nature protection sites designated under the Habitats Directive and the Birds Directive.

ambitions across a range of aspects from tackling the spread of invasive species, mitigating the effects of chemical and nutrient pollution and reducing low flow events in rivers.

- (ii) *DEFRA’s 25 Year Plan to Improve the Environment*.²³ DEFRA’s plan includes commitments to ensure that water companies take a leading role in addressing unsustainable abstraction as a part of the WINEP. DEFRA also plans to regulate all significant abstractions that have historically been exempt from regulation by 2022, to ensure that they protect the water environment.
- (iii) *Sustainable Drainage Systems (“SuDS”)*. The Flood and Water Management Act 2010 included provisions encouraging the use (and requiring the adoption) of SuDS but the Government has not brought these provisions into force in England. However, new rules on surface water sewers have applied to all water and sewerage companies in England since 1 April 2020. The new rules, which are part of the Sewerage Sector Guidance documentation approved by Ofwat under its Code for Adoption Agreements, allow English water and sewerage companies to adopt a wider range of sewer types, including those with sustainable elements, than they were previously able to. In addition, the Ministry of Housing, Communities and Local Government’s National Planning Policy Framework of February 2019 states that “*major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate*”.²⁴

3. TO WHAT EXTENT DOES THE EXISTING REGULATORY REGIME ALREADY PROVIDE FOR SUSTAINABILITY?

- 3.1 This section reviews the approach taken to considering issues of sustainability in the water industry, by reference to the approach described in the definitional note, and considers the extent to which the existing regime provides for the achievement of the goals identified in that note.

Long-term intergenerational issues

- 3.2 One of the general duties of the Secretary of State and Ofwat under WIA is to secure long-term resilience of water supply, promoting long-term planning. This duty clearly requires the authorities to address long-term intergenerational issues in their analysis.

²³ See: www.gov.uk/government/publications/25-year-environment-plan.

²⁴ Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NP_PF_Feb_2019_revised.pdf.

- 3.3 DEFRA's 2017 policy statement - presented to Parliament pursuant to section 2A WIA - established that two priorities for the water industry in the future were the following:
- (i) *“Ofwat should challenge the water sector to plan, invest and operate to meet the needs of current and future customers, in a way which offers best value for money over the long term”*; and
 - (ii) *“Ofwat should challenge companies to improve the availability, quality, promotion and uptake of support to low income and other vulnerable household customers”*.
- 3.4 DEFRA elaborated on these priorities in the same document, explaining that Ofwat should, through regulatory methods such as price review, continue challenging companies to meet the need to balance supply and demand in a manner that represents the best value for money in the long term. Ofwat is also expected to promote the principle of intergenerational equity - defined as the principle that every generation should pay its fair share of the costs of providing water and sewerage services - which requires an appropriate understanding of future investment needs.²⁵
- 3.5 Ofwat indicated in its paper on long-term resilience for PR19 that it considered that it had taken steps to facilitate long-term investments in the water industry so as to balance supply and demand in the long run (although the extent to which regulatory efforts have been aimed specifically at upholding the principle of intergenerational equity is less clear).²⁶
- 3.6 In particular, Ofwat clarified that its assessment of the business plans that companies were required to submit for PR19 (covering the 2020-2025 investment period) would include an analysis of whether long-term resilience was adequately contemplated. Companies needed to provide projections until 2035 to demonstrate a long-term resilience focus, and their business plans were assessed on the basis of: (i) how well the company has assessed and prioritised the diverse range of risks to its systems and services, and how effectively the company has engaged with customers on this topic; and (ii) how well the company has assessed the full range of mitigation options and put in place solutions that represent best value for money over the long term and are compatible with customer preferences.²⁷
- 3.7 In addition, in PR19 Ofwat has allocated up to £469 million for companies to collaborate on developing new long-term strategic regional water resources to improve drought response, to be construction-ready during the 2025-2030 period,

²⁵ A number of other statutory or quasi-statutory bodies advise on the industry and long-term intergenerational issues. Perhaps most prominent are the Committee on Climate Change and the National Infrastructure Commission.

²⁶ See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Securing-long-term-resilience.pdf>. Sustainability First has considered the balance between long-termism and pricing in the utilities sector in its paper “Circling the Square”: https://www.sustainabilityfirst.org.uk/images/publications/other/SF_Future_of_utilities_regulation_Discussion_Paper_FINAL.pdf.

²⁷ See: <https://www.ofwat.gov.uk/regulated-companies/price-review/2019-price-review/business-plans>.

including 11 “source-type” projects (i.e. reservoirs, effluent reuse) and seven “transfer type” projects (i.e. river, canal and pipeline transfer routes).²⁸

- 3.8 An example of a project to address long-term resilience is in United Utilities’ PR19 final determination, which refers to a scheme to deliver replacement tunnels to ensure resilience of water supplies to populations in Manchester and the Pennines using a Direct Procurement for Customers (“DPC”)²⁹ model.³⁰ United Utilities’ business plan explained that the project sat outside of company’s core total expenditure budget, and was the subject of an allowed cost adjustment claim because of “the unique nature of the project”.³¹ In the final determination, Ofwat allowed £57.4 million for this project. However, this does not represent a departure from the norm of assessing and authorising investments within the five-year price review period. Instead, examples such as this show that it is possible to address long-term issues at least to some extent within the current five-year review periods.
- 3.9 Whilst the analysis above, given the focus of this note, concentrates on the initiatives and incentives that are connected to the operation of the regulatory regime, we are aware that there are also examples of water companies choosing to reinvest profits that would otherwise be paid out to shareholders into long-term investment. Examples include Severn Trent, United Utilities and South West Water, each of which has committed a proportion of its financial outperformance to reinvestment, for sustainability-related projects such as long-term resilience, innovation and assisting customers in vulnerable circumstances, as well as to invest ahead of time to make it easier to satisfy expected outcome delivery incentives in the next price control.³²
- 3.10 There are, however, situations that cannot be funded on the basis of a five-yearly price control process, whether this is done as an allowed cost or from profits. For these projects funding models need to be developed outside the normal price controls to allow the development of infrastructure with a focus on enhancing long-term resilience. For instance, it is sometimes necessary to carry out major capital investment to ensure long-term compliance with environmental regulation. This kind of infrastructure investment can require thinking on timescales much longer than the five-year price control process. Shorter price control periods may thus result in greater difficulty in acquiring funding for longer term projects. Moreover, in some cases, shorter price control periods may also result in intergenerational issues, where

²⁸ See page 8 of Ofwat’s overview of PR19: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Overview-of-final-determinations.pdf>.

²⁹ Ofwat had made their expectations in terms of DPC clear in advance of UU’s plan being submitted (e.g. see: <https://www.ofwat.gov.uk/publication/1810-direct-procurement-customers-dpc-setting-expectations-high-quality-well-evidenced-case/>). DPC is expected to be used more widely by water companies in the future.

³⁰ See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-United-Utilities-final-determination-.pdf>.

³¹ Cost adjustment processes allow companies to make well evidenced claims for unique and material costs that are unlikely to be captured by cost baselines in Ofwat’s price review, such as atypically large and/or customer driven investments. See: <https://www.ofwat.gov.uk/wp-content/uploads/2018/03/IN-1802-Price-review-early-submissions-on-3-May-2018-for-performance-commitment-definitions-and-cost-adjustment-claims2.pdf>.

³² See the Consumer Council for Water’s 2018-19 report on water companies’ financial performance: <https://www.ccwater.org.uk/wp-content/uploads/2020/03/Water-Companies-Financial-performance-report-2018-19.pdf>.

the cost of the project is not spread out evenly between different generations of customers whom the project benefits.

- 3.11 The most high-profile current example of such a long-term project in the water industry is the Thames Tideway project. The TTT is being built by Bazalgette Tunnel Limited (“**Bazalgette**”), a separate company formed solely for the purpose of developing the relevant infrastructure. The TTT will be then be leased to Thames Water to operate on a 125-year concession at a price set by Ofwat. This is the first project to be delivered under the Water Industry Regulations for Specified Infrastructure Projects³³ which allow for certain large and complex infrastructure projects to be delivered by infrastructure providers that are selected by the incumbent water undertaker (in this case Thames Water) via a competitive procurement, and regulated by Ofwat under a project licence.
- 3.12 To address the challenge of securing funding for a project that would in normal conditions only reap returns on the long-term, Bazalgette shareholders have been allowed a return on investment during the construction period so as to lower finance costs and keep the impact on bills at a minimum. This return is funded out of the monies billed by Thames Water on behalf of Bazalgette to Thames Water’s wastewater customers.³⁴ DEFRA also agreed to a “government support package” that covered certain low-probability, high-cost uninsurable risks - including the risk that government would cancel the contract. This was in turn critical for securing investment grade credit rating.
- 3.13 Furthermore, Ofwat explained that the Thames Tideway project represents a departure from Ofwat’s standard approach to the determination of revenues for water industry companies: *“While typically in the UK water industry revenues of incumbent water and sewerage undertakers are determined by Ofwat on a five-yearly look forward basis, in the case of the IP [TTT], there are three different stages - construction, initial operation and long-term operation - with different allowed revenue calculation methodologies applying to each stage”*.³⁵ The project’s construction phase is expected to last until 2022, after which TTT will be operated and maintained by Bazalgette until February 2027 (this is the initial operation phase), which is the date in which above-ground assets, structures and equipment are expected to be transferred to Thames Water (inaugurating the long-term operational phase). Bazalgette will, however, remain responsible - during the long-term operational phase - for inspections of deep tunnels and shafts, and for performing maintenance required as a result of the inspections. During this period, Bazalgette will be subject to the standard five-year price control process.
- 3.14 The TTT example shows that the framework for large-scale infrastructure projects has gone some way to addressing the issue of funding investments whose scale is difficult to accommodate within a five-year price control period. However, there are inevitably tensions when consumers are asked to pay more now for investments where

³³ This new framework was put in place under Part 2A WIA (inserted in 2010 by the Flood and Water Management Act 2010), pursuant to which the relevant Water Industry Regulations were made.

³⁴ Tideway raised £1.3 billion of the funds from equity investors, to whom Tideway paid a total of £75.45 million in 2017/2018. Of this total, £23.84 million was used to repay the shareholder loan, while £51.6 million was paid as dividends (set at 8% per year until the loans mature in 2064).

³⁵ See: https://www.ofwat.gov.uk/wp-content/uploads/2015/10/pap_pos20150824baztttlic.pdf.

they will not see the benefits for many years (if ever). As a result, it remains to be seen how widely used this framework will be outside the context of TTT - at the time of writing there have been no other proposals to use this framework.

People-centred services and localism

- 3.15 Ofwat appears to be actively attempting to incentivise community/customer engagement in the design and revision of policy decisions affecting the water industry.
- 3.16 On 25 May 2016, Ofwat published its “customer engagement policy statement and expectations for PR19”³⁶ which explained that for the purposes of PR19 it expected companies to be responsible for engaging directly with customers (given that the latter are in the best position to develop an accurate account of customer needs and requirements) and using the information provided by customers to drive decision making and provide high levels of service. As part of Ofwat’s customer engagement strategy, Customer Challenge Groups were established for each company during the PR19 process to provide independent challenge to companies and assurance to Ofwat on the quality of the company’s customer engagement and the degree to which that engagement is actually reflected in its business plan.
- 3.17 As a result, water companies carried out extensive customer engagement exercises before submitting their PR19 business plans. Thames Water’s business plan stated that “*the outcomes are rooted in our most extensive ever programme of customer engagement and insight with nearly one million customers*”,³⁷ and United Utilities said that it had “*gained a greater understanding of customers’ expectations than ever before, underpinned by a comprehensive and structured engagement programme*”.³⁸ These initiatives are in addition to pre-existing people-centric initiatives, e.g. water companies offering “priority services” support to people in vulnerable circumstances, raising awareness in the community of available supports, and targeted engagement to mitigate the consequences of vulnerability.³⁹
- 3.18 Ofwat has also introduced in PR19 a new method of quantifying consumer satisfaction: the Customer Measure of Experience or “C-MeX”. Ofwat believes that this creates an incentive for leading water companies to improve continually. According to Ofwat, the benefit of this new system is that it covers the satisfaction of all water company customers (not merely those who have contacted their company).
- 3.19 Amongst the case studies referenced by Ofwat in the PR19 final determinations overview, we have identified below some examples that suggest some regulatory

³⁶ See: https://www.ofwat.gov.uk/wp-content/uploads/2015/12/pap_pos20160525w2020cust.pdf.

³⁷ See: <https://www.thameswater.co.uk/-/media/Site-Content/Thames-Water/Corporate/AboutUs/Our-strategies-and-plans/PR19/Our-plan-2020-to-2025.pdf>.

³⁸ See: https://www.unitedutilities.com/globalassets/z_corporate-site/pr19/uuw102_chapter_2.pdf.

³⁹ See e.g. Dwr Cymru’s document “supporting our customers”: <https://www.dwrcymru.com/-/media/Files/Company-Information/PR19/Documents/3-Strategies/32-PR19-Supporting-Our-Customers-WSH.pdf?la=cy-GB&hash=328648EBE4EC93DF5FADF88D2DBEAD2EE49DD798>.

effort to ensure that local communities' preferences and views on certain aspects of service provision are voiced:⁴⁰

- (i) When discussing the chalk streams case study,⁴¹ Ofwat explained that it was doing work to ensure that long-term solutions would alleviate the pressure on chalk streams by creating new supplies, and that it would be working with regulators, companies and local groups to identify what else can be done.
- (ii) As examples of engagement with local communities, Ofwat cited that: (i) Affinity Water would be working with local communities on eight pilot projects that might benefit the environment; and (ii) Wessex Water would be working together with local communities to improve local beaches.

- 3.20 While there may be limits on the extent to which funding can be provided through the price controls in response to specific local priorities, this seems to be less of an issue for the regulator than in the energy sector (see paragraph 3.30 of the energy note).
- 3.21 More generally, Ofwat's 2019 Strategy Paper acknowledges that "water services are inherently local", and that it expects companies to deepen their knowledge of local communities and improve their relationship with these communities. Ofwat listed several actions that it would carry out to improve outcomes for customers and communities.⁴² Ofwat further recognised that strong customer/community participation is a crucial aspect of reducing the risks of pollution and changing societal water use patterns. It indicates that it will look at using the price review to improve the ability of customers and stakeholders to shape and challenge companies' future business plans.
- 3.22 DEFRA's 25 Year Environment Plan aims to put in place strong local leadership and a more integrated delivery framework. DEFRA plans to work closely with local authorities, the public, and other stakeholders.
- 3.23 There is therefore a lot of policy aimed at actively encouraging community engagement and people-centred services, and no obvious legal barriers to water companies engaging in these activities. Water companies have responded to this by engaging with customers to a greater extent than ever before submitting their PR19 business plans. An assessment of the impact of these initiatives is beyond the scope of this note. However, the time and resources of both Ofwat and the water

⁴⁰ To be clear, there are other examples of local interests being taken into account in projects carried out by water companies. For instance, community engagement and support is at the heart of United Utilities' project to enhance long-term supply resilience in Manchester and Pennines.

⁴¹ See page 10 of <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Overview-of-final-determinations.pdf>.

⁴² Specifically, the actions are: (i) "Do more to listen and understand people's needs and priorities. We will use customer research and social media, and work with the Consumer Council for Water (CCWater) to improve the body of evidence on people's attitudes and experience. We will use this to test our own policies as well as to challenge companies about their performance and the maturity of their partnerships and collaboration with the people they serve"; (ii) "Work jointly with consumer bodies and regulators in other sectors to provide a more holistic support framework for customers in vulnerable circumstances"; (iii) "Improve the customer complaints handling process so that customers are helped more effectively and quickly"; (iv) "Consider the case for new high-level licence obligations to provide binding requirements on how companies treat their customers and the most vulnerable in society".

companies may impose a significant constraint on these initiatives, particularly when conducted as an input into the overall business plan and price control review process.

- 3.24 We note that there is significant controversy in practice over whether, or to what extent, Ofwat has in fact addressed consumer views in the context of PR19 - where some water companies have argued that Ofwat has prioritised price reductions over sustainability issues to a greater degree than was indicated by their consumers' preferences.⁴³ This is an aspect of the ongoing appeals, which the CMA expects to determine in the near future.⁴⁴ For the reasons set out in paragraph 1.2, assessment of the merits of these issues is beyond the scope of this note. However, we do not understand the arguments of any of the parties in these cases to be that there were legal restrictions on Ofwat's ability to allow funding.

Environment and emissions

- 3.25 There are three aspects of the water industry that are particularly relevant to environment and emissions:
- (i) The water industry emits about 4 Mte each year, which is a significant part of the UK carbon footprint (about 1%);
 - (ii) The activities of water companies have significant effects on the natural environment, including pollution, biodiversity and natural amenity; and
 - (iii) Water usage has to be managed to avoid diverting water from important natural processes, and more broadly to minimise the impact of drought.
- 3.26 The existing environmental legal and policy framework referenced at paragraphs 2.27 to 2.30 places fairly extensive controls on water companies to ensure that the risk of environmental impact and damage is minimised and controlled. While the environmental regulators face challenges presented by public funding limitations and the breadth of their remit, they generally take a proactive approach in the regulation of the water industry. An example of this is the criminal investigation into Southern Water referenced at paragraph 2.6 above. The EA also issues annual reports on the environmental performance of water and sewerage companies, which include recommendations for companies, and which can give rise to enforcement action.
- 3.27 This approach to enforcement has seen the water industry incur some of the highest environmental fines of any industry and a requirement to provide more extensive enforcement undertakings. A notable example is the £20.3 million fine and costs levied against Thames Water in March 2017 in respect of a series of significant pollution incidents on the River Thames. However, in most cases fines are a small fraction of turnover, generally not exceeding £2m. Similarly civil enforcement undertakings, used instead of criminal undertakings, have been fairly modest. For

⁴³ See Anglian Water's statement of case in the CMA redetermination, for instance at paragraphs 17 and 40: <https://www.anglianwater.co.uk/siteassets/household/about-us/cma-pr19-redetermination-statement-of-case.pdf>.

⁴⁴ For more detail see Sustainability First's report to Citizens Advice on customer engagement in PR19: <https://www.citizensadvice.org.uk/Global/CitizensAdvice/Sustainability%20First%20-%20Final%2024.06.2020.pdf>.

example in 2008 the EA accepted 15 enforcement undertakings across the water industry totalling £3.4m.

- 3.28 The EA criticised water companies in its annual report on the water industry of July 2019, noting deterioration in performance and also evidence that efforts have begun to plateau. The EA has stated that it will discuss with Ofwat how they can work closely to use financial penalties and incentives associated with environmental performance.
- 3.29 This suggests that the existing regulatory regime in this area does provide for sustainability but the pace of the enforcement process and the often modest level of the fines mean that water companies are not always incentivised to comply with requirements. However, this is not specific to the water industry and is more generally reflective of the enforcement policies adopted by the environmental regulators in the UK.
- 3.30 Ofwat has promoted and funded investment in environmental projects through the price control: e.g., many water companies have run catchment management programmes, with funding allowed by Ofwat and with support and grants from Natural England and the Forestry Commission. These programmes have worked to improve water quality, e.g. by reducing pollution and remedying damage done to catchment land by intensive agriculture.⁴⁵
- 3.31 The proposed reforms to the water abstraction regime (including through the revocation and variance of licences without requiring the payment of compensation, the introduction of wider measures to prevent unsustainable abstraction and regimes to allow for the trading and sharing of supplies) provide evidence of the proposed pathway to more sustainable water management.⁴⁶ Similarly, the Environment Bill will place further obligations on water companies in respect of the preparation of water resources management plans and drought plans (already required under WIA) and will impose new requirements in respect of drainage and sewerage management plans.
- 3.32 There is also evidence that various frameworks exist to ensure that the relevant regulators collaborate to achieve the sustainability objectives. More formal examples include the Memoranda of Understanding between Ofwat and DEFRA and the joint letter between DEFRA, the EA, DWI and Ofwat on “Building resilient water supplies”. Less formal collaborative efforts include the new Regulators’ Alliance for Progressing Infrastructure Development (RAPID) which seeks to ensure that regulation enables strategic schemes to improve resilience of water supplies into the future, for example through the use of transfers between regions in England, and developing joint infrastructure such as shared reservoirs. This is particularly relevant to meeting the challenges presented by climate change and population growth.

⁴⁵ See e.g. United Utilities’ page on its catchment management initiatives:
<https://www.unitedutilities.com/corporate/responsibility/environment/catchment-management/>.

⁴⁶ See DEFRA’s report on abstraction reform:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/801495/abstraction-reform-report.pdf.

- 3.33 Other examples of interaction between Ofwat and the environmental regulators include:
- (i) DEFRA’s statutory charging guidance to Ofwat, which seeks to ensure that the government’s policy priorities for the water industry, including in respect of fairness and affordability, environmental protection, stability and predictability, transparency and customer-focused service, are reflected in Ofwat’s charging structures.
 - (ii) DEFRA’s 2017 policy statement, which addresses the natural environment, and directs Ofwat to have regard to DEFRA’s 25 Year Environment Plan, which in turn pledges to tighten environmental regulation to ensure the preservation of the environment for future generations. DEFRA notes that the plan “*will help boost the productivity by enhancing our natural capital - the air, water, soil and ecosystems that support all forms of life - since this is an essential basis for economic growth and productivity over the long term*”.
 - (iii) In PR19, Ofwat has included a £4.8 billion investment in environmental programmes, specifically delivering on National Environment Programmes for England and Wales, including pollution, leakage and usage reduction (see paragraph 2.30(i) above). However, it is not clear that this would be available for companies wishing to exceed their environmental obligations, should they wish to do so. It has also included specific commitments supporting the broader industry commitment to net zero emissions by 2030.⁴⁷
 - (iv) Ofwat’s 2019 Strategy Paper, which includes the environment as part of its three major objectives.

Short-term flexibility

- 3.34 In PR14 Ofwat revised its approach to the management of risk, moving to an outcomes-focused approach to delivery to give companies more flexibility to find more effective or efficient solutions - and more scope to mitigate impacts on customers when risks crystallise.⁴⁸ The new approach adopted in PR14 was replicated in PR19, requiring water companies to be more flexible within the business plans upon which their pricing final determination was based. The PR19 Final Methodology statement provides that “*All businesses have to deal with risk and uncertainty when operating and planning their activities. They all have to take steps to understand, manage and mitigate the potential impacts of risk and uncertainty on their operations and profitability. Waste and wastewater companies are no different.*”

⁴⁷ In November 2020, Water UK, which is an industry body rather than a regulator, put forward detailed plans to achieve the 2030 net zero goal: <https://www.water.org.uk/routemap2030/wp-content/uploads/2020/11/Water-UK-Net-Zero-2030-Routemap.pdf>.

⁴⁸ The PR14 Final Methodology Statement acknowledged that the change protocol had previously been used as a formal process for managing the risks and costs associated with in-period changes in companies’ statutory obligations. However, Ofwat decided that it wanted “*companies’ Boards to take more ownership of - and accountability for - what they deliver. This includes taking more responsibility for managing the risks associated with changes in statutory obligations. We do not want to constrain companies by imposing a centralised process for managing changes in statutory obligations. Instead, companies should put forward proposals for dealing with such changes that reflect their customers’ priorities and their own particular circumstances (which might include consideration of the level of uncertainty around obligations for 2015-20)*”.

- 3.35 PR19 makes reference to the importance of short-term flexibility⁴⁹ and Ofwat’s 2019 Strategy Paper, issued in October 2019, also indicates that the price review framework allows water companies to adopt innovative ways of delivering services, and that Ofwat was “*encouraged to see some companies demonstrate real ambition in this space.*”
- 3.36 There is therefore no regulatory barrier to short-term flexibility, in the sense of water companies changing their processes or operations, provided that companies are still achieving the specified outcomes.
- 3.37 However, there is very little scope for adjustment of the price limits that are set at the start of each five-year period. There are some limited mechanisms that companies can use to achieve a change to their price controls mid-way through the price review, but the scope of these is defined tightly:
- (i) *Interim determinations.* An interim determination allows a company to apply for its price limits to be reset if specific changes lead to a significant reduction in its revenue or increase in their costs. The application will be assessed against the criteria set out in the company’s licence, and the materiality test (the changes in costs, receipts or revenues are at least equal to 10% of the company’s turnover) and triviality test (to be included in the materiality test, a change must be at least 2% of the company’s turnover) must be met. These two tests ultimately make the financial threshold for interim determinations high. Furthermore, the grounds for interim determinations are very specific and subject to a low degree of flexibility (as they are set either during price review or as a licence condition).
 - (ii) *Substantial effect determinations (“Shipwreck clause”).* A substantial effect determination allows a company to apply for its price limits to be amended if an unforeseen circumstance substantially increases any of their costs or revenue. Ofwat applies a two-stage test: (i) whether the application is sufficiently material (defined as equal to at least 20% of company turnover) and whether prudent action by the company would have meant the impact on revenue or costs could have been avoided; and if that test is satisfied (ii) whether an adjustment to price limits is necessary (in which assessment Ofwat will consider its duties under WIA). Like interim determinations, the grounds for substantial effect determinations are limited and the financial threshold is high, compromising its potential to enhance short-term flexibility.
- 3.38 Interim and substantial effect determinations in their current forms could not be used by water companies to change their price controls in order to further sustainability goals. Such applications are relatively rare; there have been 12 interim determination applications since 2000 (of which ten were successful) and three substantial effect applications in the same period (of which two were successful). The grounds for either determination would not cover, for example, situations where a water company

⁴⁹ PR19 specifically mentions short-term flexibility in the following excerpt: “*People rely on water and wastewater services every day, so they need services that can avoid, cope with and recover from disruption, and that protect and enhance the natural environment. This means water companies need the right information, systems, processes, governance, capabilities and finances to make decisions about their operations, maintenance and investment in the short and long term. They need operational, financial and corporate resilience - ‘resilience in the round’.*”

realises that it could make changes that would benefit the environment if it were able to adjust its price controls.

- 3.39 Overall, therefore, under the current outcomes focused approach, there does not seem to be any *per se* restrictions on the ability of companies to implement changes to service delivery methodology/technology and the price control regime is designed to incentivise companies to make changes to processes that will reduce costs. However, the fact that under the current regime Ofwat has to form a view on how things will progress during a five-year period to set the price control means that companies seeking to engage in different (potentially sustainability-inducing) projects with different (rather than necessarily lower) costs/cost profiles might find it harder to fund these projects.
- 3.40 A further factor to consider in this context is that the limited scope to reopen price settlements reflects the fact that investment in water companies is facilitated by the certainty that the five-year price control periods give. Any changes to the regulatory regime that allow greater scope for changes within price control periods could lead to greater uncertainty of income, and therefore may make water companies a less attractive investment.
- 3.41 Finally, there may also be behavioural factors to consider. Water companies have to deal with Ofwat on an ongoing basis and may therefore be less likely to pursue a course of action that Ofwat is known to oppose (and correspondingly be more likely to pursue something that it supports). In this way Ofwat may exert an informal influence on companies' decision-making over very short timeframes.

Investment in innovation

- 3.42 When discussing innovation, it is helpful to differentiate between technological innovation and a wider category of organisational, institutional and commercial innovation, which seeks to create new and better processes, structures and frameworks for business to work within. There are strong incentives for water companies to pursue the latter type of innovation, since creating efficiencies is a way to increase profits for shareholders within the price control system. However, for the reasons discussed below, there may be greater barriers to risk-taking technological innovation because of the way the price control regime operates.
- 3.43 It is clear that the relevant regulatory authorities recognise in principle the benefits of innovation in the water industry. DEFRA's 2017 policy statement refers on several occasions to using and encouraging innovation to drive positive change in the water industry, and highlights the role of competition in encouraging innovation.
- 3.44 Innovation is also one of Ofwat's four "themes" of PR19. It emphasises that the outcomes-based framework gives "freedom to innovate and explore" to find the right solution. It also notes that encouraging innovation must be balanced with "protecting customers from excessive risk-taking". However, there is also principled opposition to "picking winners", i.e. identifying favoured pathways for innovation and eliminating

others from the top down.⁵⁰ The decisions on which innovations to pursue are therefore left to the water companies.

- 3.45 Ofwat’s 2019 Strategy Paper includes a focus on innovation and a commitment to drive innovation, especially with greater funding. It indicates that it may consider certain activities separately from the price review in future, such as large infrastructure projects, which it suggests may be better achieved by way of direct procurement projects (similarly to the TTT).
- 3.46 However, water companies who innovate expose themselves to more risk than companies in non-regulated sectors, because successful and unsuccessful investment decisions are treated asymmetrically within the price control regime. Where an innovation is successful, the fruits of that investment will in principle be available to the company and its shareholders for the duration of the current price control period but will then be “clawed back” for the consumer by adjustment of price controls. By contrast, the costs of failures are entirely the responsibility of the private investors. This asymmetry is increased under PR19 as price settlements are based on an assumption that there will be some outperformance of current performance commitments, and they seek to allow profits only where outperformance goes beyond the “industry norm” or “performance frontier”.⁵¹ This approach is consistent with an objective of minimising bills for customers in the short term, but may create incentives to avoid deviation from the performance of other water companies, as unsuccessful deviation is penalised while successful deviation is not fully rewarded.
- 3.47 To address some of these issues Ofwat has included in PR19 a £200 million investment in “transformational” innovation through an “innovation competition”. The competition design is currently in development but Ofwat has announced that funding will be provided through an increase in revenue at PR19, which will be collected by the companies from their customers. The amount each company’s customers will contribute will be proportionate to individual company revenue. The competition will run at least on an annual basis, starting in 2021. Ofwat has indicated that it expects companies to work closely with each other, the supply chain, and other stakeholders and that it intends to encourage collaborative bids.

Collaboration

- 3.48 DEFRA’s 2017 policy statement highlights the need for coordination and collaboration in the water industry to meet future water supply needs. It particularly highlights interconnections (i.e. water transfers across water company boundaries) and cascades (i.e. chains of interconnections that move surpluses via a series of rebalancing transfers, effectively achieving long-distance water transfer without pipelines) in this respect. DEFRA’s 25 Year Environment Plan calls on organisations and individuals (in the UK and globally) to collaborate on environmental protection.
- 3.49 Ofwat’s 2019 Strategy Paper includes “increased collaboration and partnerships” explicitly as part of its three major objectives. Ofwat’s £469 million investment for

⁵⁰ See for example <https://www.ofwat.gov.uk/wp-content/uploads/2019/05/David-Black-speech-2019-05-02.pdf> at page 5.

⁵¹ See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Overall-level-of-stretch-across-costs-outcomes-and-allowed-return-on-capital-appendix.pdf>.

companies to collaborate on developing new long-term strategic regional water resources to improve drought response (referred to in paragraph 3.7 above) puts this objective into practice.

- 3.50 However, despite this support in principle for collaboration, the individual nature of the price control can be a limitation in terms of needing to share out the costs/risks/rewards in a timely way. There is no formal mechanism for allocating these elements between two or more water companies engaged in a collaborative project, and moreover the regulation of the water industry takes as its starting point the comparison of the performance of different companies against each other. This may be an obstacle to proceeding with collaborative projects that are large, costly or complicated.
- 3.51 Competition law may be seen as a further potential obstacle to collaboration, as arrangements between competitors that are found to breach the provisions on cartels can expose both companies and individual participants to significant sanctions. However, many collaborations between competitors are legal and such collaborations are common throughout the economy. The nature of the water industry - where there is limited direct competition outside of non-retail supply - will often make this less of a risk than in many other industries, and the types of collaboration that Ofwat is likely to be interested in promoting (especially inter-company water transfers) are likely to be possible within the existing framework of antitrust law. Furthermore, the view that competition law should not stand in the way of sustainability goals has been gaining traction, having recently even been voiced by a judge of the UK Competition Appeal Tribunal.⁵²
- 3.52 Nonetheless, there can be a perception that competition law makes collaboration risky, and the significant penalties that can attach to a competition law breach can mean that the downside risks are seen as outweighing the - most likely contingent - benefits that collaboration may bring, and thus act as a disincentive, particularly in marginal cases. This chilling effect is heightened by the fact that it is often difficult for companies to obtain positive statements from regulators that conduct does not infringe competition law.⁵³ This is therefore an area where there is scope for competition law to develop to allow companies more easily to access positive confirmation that their proposed conduct will not attract competition law penalties, thereby reducing the risk of collaboration.
- 3.53 There are already some limited examples of cooperation arrangements in the form of mutual aid schemes, which exist for the purpose of emergency cooperation.⁵⁴ This suggests that - subject to a proper competition law assessment - there are some

⁵² See: https://events.concurrences.com/IMG/pdf/simon_holmes_article.pdf. See also recent commentary from Jordan Ellison <https://ssrn.com/abstract=3542186>.

⁵³ The short-form opinion process that is operated by the Competition and Markets Authority (“CMA”) to give guidance on certain types of arrangement is rarely used and, as it is a public process, is not suitable for all types of arrangements.

⁵⁴ See, e.g., https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/271370/SR_P_Public_Summary_2013.pdf.

existing processes and relationships that could be used as a starting point for wider industry cooperation.

4. WHAT COULD BE DONE, FROM A LEGAL PERSPECTIVE, TO FACILITATE ACHIEVEMENT OF SUSTAINABILITY OBJECTIVES?

- 4.1 Based on the analysis above, there is already scope within the current legal and regulatory arrangements for more to be done to encourage sustainability initiatives, if that were agreed as a policy objective. Our analysis suggests that the extent to which constraints are set on the ambitions of companies by the legal regime is limited. Generally, companies that are interested in doing things on their own initiative - such as adopting more sustainable commercial practices - legally have scope to do so. Indeed, there are a number of examples of companies choosing to prioritise, and to fund from shareholder resources, initiatives that are directed at sustainability goals (see paragraph 3.8 above).
- 4.2 There are also examples of steps being taken within the regulatory regime to support sustainability initiatives, including the innovations in PR19 identified elsewhere in this document. However, it seems that there can be issues with securing recognition through the price control for (i) customer preferences for investment where that requires higher prices (see paragraph 3.24 above); (ii) going beyond minimum standards (see paragraph 3.32 above); (iii) short term flexibility (see paragraphs 3.34 to 3.39 above); and (iv) innovative projects where there is no clear consensus on what the right approach/outcome is (see paragraph 3.43 above).
- 4.3 More generally, there may be a resourcing/prioritisation issue in that water companies will need to focus on delivery of their legal obligations as a priority, and there will be limits on what can be achieved on an individual, shareholder-led basis, particularly where co-ordination is required or where there is uncertainty as to future regulatory intentions that may impact on decision making.⁵⁵
- 4.4 Some level of constraint is also likely to arise as a result of core directors' duties. Corporate law requires directors to "*promote the success of the company for the benefit of its members as a whole*", while having regard to the interests of other stakeholders.⁵⁶ The ongoing debate about shareholder primacy and the interests of stakeholders and long-term value (particularly in a business, ownership and financial model that has been designed by its owners, typically, to produce a consistent yield) has implications for companies' ability to make decisions that promote sustainability at the expense of shareholder return in circumstances where these two objectives do not align. Whilst this is an evolving area, and across the economy there has been increasing interest in the purposeful business agenda, the board risks shareholder

⁵⁵ Water companies do not exist in a vacuum, and clearly many other factors - including politics, opinions of customers and other citizens, and the behaviour of other water companies - create non-regulatory incentives, which may also promote sustainability.

⁵⁶ See Companies Act 2006, section 172. The UK Corporate Governance Code and the Companies Act 2006 also require "large" companies to produce a statement which describes how the directors have had regard to the matters set out in section 172(1)(a) to (f) when performing their duty under section 172. "Large" companies includes private and AIM companies that meet at least two of the following criteria: turnover of more than £36m; balance sheet total of more than £18m; more than 250 employees.

dissatisfaction and even (*in extremis*) litigation under company law for getting the balance wrong.⁵⁷ The pull from investors in terms of Environmental, Social and Governance factors is also relevant here (particularly when it is driven by activity from initiatives such as the Task Force for Climate Related Financial Disclosures) and is increasing company focus on these issues.

- 4.5 However, in our view, if the aim is to help water companies to do more to pursue a sustainability agenda then the area to focus on is funding and incentives. This is not primarily a legal question. Many important aspects of the price control framework are not expressly provided for in WIA; rather, they reflect policy choices. There is, for instance, no legal barrier to the introduction of a longer price review, and/or the inclusion of an option for an interim “mini-review” of the current terms, if it was thought that this might help to solve the competing demands for long-termism and short-term flexibility.⁵⁸ However, any such move would require buy-in from a broad range of stakeholders and the benefits of such a move would need to be weighed against the potential disadvantages, for example in terms of a loss of certainty (which may impact on the ability of companies to raise finance to fund investment).
- 4.6 Beyond the price control itself, other steps to be considered, if the objective is to increase the emphasis placed on sustainability, without any changes to primary legislation could include:
- (i) Updating the statutory strategic policy statement to increase the emphasis that is placed on sustainability. To the extent that Ofwat’s current approach is driven by the content of such policy statements, this could re-focus Ofwat’s approach to regulating the industry more broadly and potentially act as a catalyst for consideration of other changes to obligations on water companies.⁵⁹
 - (ii) A review by Ofwat of its policy focus, even without changes to the wider policy framework. Ofwat has already taken steps in this direction, such as in its October 2019 Strategy Paper “Time to act, together”, in which Ofwat mentions its desire for water companies to serve a “wider public purpose” with a focus on delivering more for customers, society and the environment.⁶⁰

⁵⁷ Companies can, with appropriate authority and support from shareholders, amend their Articles of Association which can change the effect of section 172 - see e.g. Anglian Water’s recent decision to embed a “public purpose” into its Articles: <https://www.anglianwater.co.uk/news/anglian-water-becomes-first-water-company-to-embed-public-interest-at-its-core/>. We are not aware of any examples of energy companies having amended their Articles of Association in this way.

⁵⁸ Although the use of eight-year review periods in electricity distribution, which was intended to allow greater scope for strategic decision making, has come in for criticism, and the upcoming RIIO-ED2 process reverts to a five year price control. See also the National Audit Office’s report on DEFRA’s oversight of the water industry, which includes reflections on the length of the price control period: <https://www.nao.org.uk/wp-content/uploads/2020/03/Water-supply-and-demand-management.pdf>.

⁵⁹ For example, Ofwat could propose changes to water companies’ instruments of appointment pursuant to Chapter 1 WIA (although amendment would require consent or a CMA reference) to achieve sustainability goals, such as to require water companies to take into account expertise in sustainability when making appointments to their boards.

⁶⁰ See “Time to act, together: Ofwat’s strategy”.

This year Ofwat also announced it was hiring a new Director of Governance, Environment and Public Value. Further steps could include:

- (a) Finding opportunities to offer pro-active and public support for proposals from companies willing to adopt sustainability-inducing commercial practices. This might also involve working with water companies and local communities to select and monitor the results of sustainability proposals, or calling on water companies to adopt sustainability measures that prove to be successful and effective.
- (b) Ensuring that the legitimate concerns around “protecting customers from excessive risk-taking”⁶¹ do not act as a block on innovative projects where there is a real prospect (but not certainty) of potential benefits for consumers.
- (iii) Appointments to governmental bodies responsible for regulating/enacting policies for the water industry (including Ofwat) could place a greater emphasis on building expertise on sustainability issues either “in the round” or through the allocation of one or more board seats to individuals with proven expertise in sustainability matters. A similar approach could equally be applied to the boards of water companies.
- (iv) With respect to the antitrust law chilling effect referred to in paragraph 3.52, regulators (either the CMA or Ofwat exercising concurrent powers) could publish “safe harbours” for certain kinds of collaboration that could help to allay these concerns (either in the form of informal guidance or formal legal exemptions). Recent statements by European antitrust regulators (including the CMA) relating to collaboration to ensure fair distribution of scarce products during the COVID-19 pandemic provide some examples of what might be possible in this area.⁶²
- (v) Ensuring transparency in Ofwat’s decision making and governance processes. The regulator will necessarily have to prioritise certain objectives over others. Showing how key policy decisions are arrived at will help stakeholders understand these trade-offs and may help to increase engagement with the regulatory process going forward.
- (vi) Finally, we would see it as important, particularly (but not only) on innovation issues, that both regulators and water companies participate in the international dialogue around these issues, so that all parties have access to the most accurate and up-to-date knowledge that is available at the time and international best practice can be shared.

4.7 For the reasons set out above, we do not see the current legislative regime in itself as a barrier to pursuit of sustainability objectives. However, if there was a desire to

⁶¹ See PR19 Policy Summary, p 34: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Policy-summary.pdf>.

⁶² See: https://ec.europa.eu/competition/ecn/202003_joint-statement_ecn_corona-crisis.pdf and, from the CMA: <https://www.gov.uk/government/publications/cma-approach-to-business-cooperation-in-response-to-covid-19/cma-approach-to-business-cooperation-in-response-to-covid-19>.

pursue legislative reform, perhaps as a way of signalling or reinforcing a change in overall approach, then the main area to consider is likely to be whether there would be a case for amending the general duties of Ofwat and the Secretary of State in WIA. For example, this could be to give consumer welfare and sustainability equal priority, to replace the “consumer” with the “citizen”, or any other permutation of general duties that would give greater prominence to sustainability goals. Another option might be to consider a specific obligation on Government to include a sustainability strategy in its statutory strategic policy statement.

- 4.8 Whatever approach is taken, the key tension that will need to be resolved at a policy level is that increased spending by water companies on sustainability issues is likely to lead to increased prices for consumers in the immediate term - even where it may reduce the cost of water in the long term.⁶³ It will therefore be important that there is strong public and Government consensus on the need to push for more sustainable measures in the water industry.

⁶³ There will be exceptions to this - including short term cost-saving innovation, and innovations that can be achieved without significant cost - see for instance United Utilities' concept of “natural capital thinking”, which focuses on working with the natural environment to achieve natural sustainability without significant expenditure: https://www.unitedutilities.com/globalassets/z_corporate-site/pr19/uuw104_chapter_4.pdf.

Legal and regulatory
aspects of sustainability
in the energy industry



1. INTRODUCTION

- 1.1 Sustainability First has asked Slaughter and May to consider the interaction between sustainability, law and regulation in different utilities industries. This note considers these themes with respect to the energy industry.¹ Given the inherent complexity of the industry - two fuels, separation of networks, retail and wholesale activities, and a wide range of actors - the note does not attempt an exhaustive review of these themes across the whole industry. Rather, it explores the key issues through selected examples and case studies. While it does consider the energy industry as a whole (and touches on aspects such as supply and generation), its particular focus is on network companies and the price control mechanisms that regulate them. This area of energy regulation is particularly topical because of the second network price control review by the Office of Gas and Electricity Markets (“Ofgem”) which is currently underway. This note should be read in conjunction with Slaughter and May’s note summarising the sustainability issues that are thought most likely to be relevant in the utilities sector (the “**definitional note**”).
- 1.2 Specifically, this note considers the relevant legal and regulatory frameworks and the extent to which they facilitate - or make more difficult - the adoption of sustainability-enhancing behaviour in the energy industry. It is focused, therefore, on identifying any limitations on what can be done within those frameworks, and is not intended to draw conclusions as to what should be done. This note therefore does not analyse:
- (i) the adequacy or quality of current sustainability-enhancing efforts by Ofgem and companies active in the industry, although it does make reference to the interaction between those efforts and the regulatory regime;
 - (ii) the incentives or disincentives that may exist outside of the legal and regulatory regime and may encourage or discourage sustainability initiatives, e.g. political/peer pressure or shareholder/customer expectations; or
 - (iii) the implications for sustainability considerations of the interaction between the energy industry and the planning regime, land access rights, and construction and health-related legislation.
- 1.3 This note has been written during the COVID-19 crisis, which clearly may act as a catalyst for change throughout the economy, including the energy industry. Pressure for change (whether or not related to sustainability) may also come from other areas, such as Brexit. We have not sought to analyse the likely impact of these factors in any detail as part of this note, but we note that the regulatory context could undergo significant changes, e.g. as a result of divergence between the UK and Europe on the future of carbon pricing or more generally on the regulation of utilities, a persistent pandemic-induced recession that reduces people’s ability to pay bills, or a

¹ For our perspective on these themes in respect of the water industry, see our note titled “Legal and Regulatory Aspects of Sustainability in the Water Industry” (the “**water note**”).

Government economic stimulus that takes the form of investment in sustainable infrastructure.²

- 1.4 Section 2 of this note gives an overview of the structure of regulation of the energy industry. Section 3 considers how the current regulatory framework allows for sustainability (as interpreted in the definitional note), while section 4 identifies changes that could be made to further sustainability goals. A reader who is already familiar with the structure of the regulatory regime may wish to proceed straight to section 3, and refer back as necessary to the relevant parts of section 2.
- 1.5 The views expressed in this note are those of Slaughter and May alone, and do not necessarily reflect the position of Slaughter and May’s clients or any other person. Slaughter and May’s involvement in Sustainability First’s project is limited to the provision of advice on the legal context and background to specific issues. We have not participated in, or been consulted on, the wider aspects of the project, nor on any conclusions that Sustainability First may reach, which are outside the scope of our work. Slaughter and May has not reviewed any documents published after the RIIO-2 Draft Determinations - Core Document dated 9 July 2020.³
- 1.6 This note is for general information only and is not intended to offer policy or legal advice, or recommend any course of action, and it may not be relied on by any person other than Sustainability First. To the extent permitted under applicable law or regulation, Slaughter and May excludes all liability (howsoever caused) to anyone other than Sustainability First for any loss or damage relating to the use of this note. Nothing in this note nor the delivery of it to anyone other than Sustainability First shall create or constitute a solicitor-client (or any other fiduciary) relationship between Slaughter and May and a third party.

2. SUMMARY OF THE REGULATORY REGIME FOR ENERGY

Institutions involved in energy regulation

- 2.1 The UK Department for Business, Energy and Industrial Strategy (“BEIS”) sets the overarching strategic and policy direction for the energy industry in the UK in order to deliver the Government’s objectives. Where necessary, it uses its legislative powers to achieve these aims.
- 2.2 Outside of England:

² For example, the CCC urges Government to ensure that the UK’s coronavirus recovery has a green focus and other experts have petitioned for the Government to “green” the economic recovery. See: <https://www.theccc.org.uk/wp-content/uploads/2020/06/Reducing-UK-emissions-Progress-Report-to-Parliament-Committee-on-Cli...-002-1.pdf> and <https://www.theguardian.com/environment/2020/mar/24/covid-19-economic-rescue-plans-must-be-green-say-environmentalists>.

³ Unless otherwise specified, any reference to the RIIO-2 Draft Determinations refers to the “RIIO-2 Draft Determinations - Core Document” (9 July 2020) (“RIIO-2 Draft Determinations”) (available at: https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_core_document_redacted.pdf). As at the date of this note, the RIIO-ED2 process is still in its preliminary stages and Draft Determinations in respect of this sector has not yet been published.

- (i) In Northern Ireland, energy policy is devolved and is the responsibility of the Department for the Economy. The equivalent energy regulator in Northern Ireland is the Utility Regulator;
 - (ii) In Scotland, energy is a reserved power (i.e. remains within the competence of the Westminster Parliament). This reservation, though, excludes certain powers including “[t]he encouragement of energy efficiency other than by prohibition or regulation”⁴ and fuel poverty; and
 - (iii) In Wales, as in Scotland, energy is largely a reserved matter, although the “encouragement of energy efficiency otherwise than by prohibition or regulation” is devolved.⁵
- 2.3 The European Union (“EU”) has also set rules to facilitate the liberalisation of energy markets across the EU and legislates for certain environmental matters, although responsibility for the implementation of these rules rests with national governments/bodies. Once the Brexit transitional period ends on 31 December 2020, the UK will not be bound by EU laws unless they are already transposed into UK law (or are otherwise preserved by the terms of the European Union (Withdrawal) Act 2018).
- 2.4 BEIS determines the roadmap for achieving the Government’s strategic objectives, often in partnership with other energy stakeholders, but responsibility for detailed policy design and implementation rests with other bodies, principally Ofgem - the executive arm of the Gas and Electricity Markets Authority (“GEMA”) (see below). However, there are exceptions to this and in some cases BEIS, acting through its agents, also fulfils a delivery role. For example, BEIS wholly owns the Low Carbon Contracts Company and the Electricity Settlements Company that were created to deliver key elements of the Government’s Electricity Market Reform Programme.⁶
- 2.5 GEMA is the legal entity that has the powers to regulate the gas and electricity markets in Great Britain. GEMA was established in the Utilities Act 2000 (“UA 2000”) and its broad role is to provide strategic direction and leadership to Ofgem, which has delegated authority to perform GEMA’s day-to-day operations.⁷ GEMA determines strategy, sets policy priorities and takes decisions on a range of matters including

⁴ Schedule 5 to the Scotland Act 1998. A list of current major reserved powers here: https://www.parliament.scot/EducationandCommunityPartnershipsresources/Your_Guide_Mar_2016.pdf.

⁵ Section D6 of Schedules 7A of the Government of Wales Act, 2006. Section D5 of the same Schedule enables the Welsh Government to regulate “Heat and cooling networks, but not the regulation of them; and Schemes providing incentives to generate or produce, or to facilitate the generation or production of, heat or cooling from sources of energy other than fossil fuel or nuclear fuel.”

⁶ The Low Carbon Contracts Company’s primary role is to manage Contracts for Difference with low-carbon generators throughout their lifetime. This involves management of the contracts as well as the Supplier Obligation Levy that funds contracts for difference payments. Critical to these functions is power price forecasting and settlement activities. The Electricity Settlements Company oversees the settlement of the Capacity Market to ensure that regular payments are made to capacity providers who have agreed to provide capacity at times of system stress. See: <https://www.lowcarboncontracts.uk/who-we-are>.

⁷ Reflecting this split, this note refers to “Ofgem” when discussing the day-to-day activities that Ofgem carries out on GEMA’s behalf.

price controls, enforcement⁸ and changes to industry codes. GEMA's board also provides corporate oversight for the work of Ofgem.

- 2.6 Ofgem was established as GEMA's executive arm following the merger of OFGAS and OFFER, the two independent regulators of the gas and electricity industries since privatisation. Ofgem's role includes: (i) issuing licences to companies wishing to carry out regulated activities in the electricity and gas industries; (ii) setting price controls in respect of monopoly networks; (iii) oversight of competitive markets; (iv) monitoring and enforcing compliance with licence conditions, standards and charging arrangements; (v) setting strategy and designing detailed policies to effect change; and (vi) ensuring compliance with relevant law and regulation - including competition law - through its enforcement powers.⁹ Ofgem's role in ensuring regulatory compliance involves it acting as both investigator and decision-maker when deciding on whether energy companies have complied with their regulatory obligations (subject to the possibility of appeal and judicial review).¹⁰ The Health and Safety Executive ("HSE") also plays an important role in the regulation of the energy industry, specifically in relation to safety management and risk control.¹¹ Its oversight of the gas industry is particularly important given the risks associated with gas escapes both for workers and the public at large.
- 2.7 There are several other bodies with discrete responsibilities for standard setting in the energy industry. Examples include the Environment Agency, Natural Resources Wales, the Scottish Environmental Protection Agency, the Northern Ireland Environment Agency (which regulates the UK electricity and gas industries from an environmental perspective), and the Office for Nuclear Regulation (which is responsible for regulating the UK's nuclear industry). Further, the Oil and Gas Authority is responsible for licensing and regulating the exploration and development of the UK's oil and gas resources, carbon capture, usage and storage ("CCUS") and offshore gas storage.
- 2.8 The remainder of this section focuses on energy industry regulation in England, Scotland and Wales only - it does not cover Northern Ireland.¹²

The Secretary of State's and GEMA's statutory functions and duties

- 2.9 GEMA was established through statute as an independent regulator, with defined duties and powers.¹³ Its principal objective - which it shares with the Secretary of State for BEIS ("Secretary of State") - is to protect the interests of existing and

⁸ GEMA is the designated enforcer under Part 8 of the Enterprise Act 2002 which means that it can take action in respect of certain consumer protection legislation.

⁹ See: <https://www.ofgem.gov.uk/about-us/our-priorities-and-objectives>.

¹⁰ See: <https://www.ofgem.gov.uk/key-term-explained/right-review>.

¹¹ See: <https://www.hse.gov.uk/regulating-major-hazards/index.htm>.

¹² Northern Ireland could be particularly affected by Brexit, with concerns raised as early as 2018 that it did not have the resources to fulfil its energy demands in the event that the Single Electricity Market, which allows Northern Ireland to import electricity from the Irish Republic, cannot be maintained. See: <https://www.ft.com/content/162f7872-ce26-11e8-9fe5-24ad351828ab>.

¹³ GEMA is established pursuant to section 1 UA 2000.

future gas consumers (in relation to gas conveyed through pipelines),¹⁴ and electricity consumers (in relation to electricity conveyed by distribution systems or transmission systems).¹⁵ The gas and electricity industries are governed by the Gas Act 1986 (“**GA 1986**”) and the Electricity Act 1989 (“**EA 1989**”), respectively (referred to together in this note as the “**Gas and Electricity Acts**”).

- 2.10 Both the GA 1986 and the EA 1989 specify that, for the purposes of the principal objective of the Secretary of State and Ofgem/GEMA, consumers’ interests are to be considered as a whole, including: (i) their interests in the reduction of targeted greenhouse gases through gas-supply emissions (in respect of gas customers) and electricity-supply emissions (in relation to electricity customers);¹⁶ (ii) their interests in the security of supply of gas and electricity to gas and electricity customers, respectively; and (iii) their interests in the fulfilment by GEMA when carrying out its objectives of certain objectives set out in EU gas and electricity directives.¹⁷
- 2.11 In performing its duties GEMA must have regard to the need to:¹⁸ (i) secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met and that all reasonable demands for electricity are met; (ii) secure that licence holders are able to finance the activities which are the subject of obligations on them; and (iii) contribute to the achievement of sustainable development.¹⁹ Further, when carrying out its functions, GEMA must have regard to: (i) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent, and targeted only at cases in which action is needed; and (ii) any other principles appearing to represent the best regulatory practice.²⁰
- 2.12 GEMA must also have regard to the interests of customers in vulnerable situations when performing its role. There is no definition of “vulnerability” in the Gas and Electricity Acts, nor does the legislation prescribe a closed category of customers in vulnerable situations that GEMA must take into account. Whilst the legislation explicitly identifies consumers on low incomes, those of pensionable age, those with a disability or chronic illness or those living in rural areas as needing special consideration, it also confers broad discretion on Ofgem to consider the interests of other categories of consumers.²¹

¹⁴ Section 4AA(1) GA 1986. The definition of gas in section 48 of the Gas Act 1986 is broad enough to include “low-carbon” gases such as hydrogen and biogas.

¹⁵ Section 3A(1) EA 1989.

¹⁶ Section 4AA(1) GA 1986 and section 3A(1) EA 1989.

¹⁷ These objectives are set out in article 40(a) to (h) of the Gas Directive (2009/73/EC) and article 36(a) to (h) of the Electricity Directive (2009/72/EC). Examples of these objectives include the promotion of competitive, secure, and environmentally sustainable internal markets for gas and electricity within the EU; eliminating restrictions on trade of electricity and gas between Member States; and ensuring measures that foster market integration and customer protection. Hypothetically, setting out the interests of gas and electricity consumers in separate Acts could prevent GEMA/Ofgem from viewing the needs of all consumers holistically.

¹⁸ The Secretary of State has equivalent duties.

¹⁹ Section 4AA(2) GA 1986 and section 3A(2) EA 1989.

²⁰ Section 3A(5A) EA 1989 and section 4AA(5A) GA 1986.

²¹ Section 4AA(3) GA 1986 and section 3A(3) EA 1989.

- 2.13 GEMA must carry out its functions in the manner it considers is best calculated to secure a diverse and viable long-term energy supply, and shall, in carrying out those functions, have regard to the effect on the environment.²²
- 2.14 In addition to its statutory duties, GEMA must also have regard to the Government’s Social and Environmental Guidance (“SEG”) when fulfilling its functions.²³ The guidance is intended to ensure that Ofgem takes account of the Government’s high-level social and environmental policy objectives when taking decisions, but it falls short of providing strategic direction to Ofgem and does not create any concrete legal duties.²⁴ To address these and other concerns, the 2011 Ofgem Review recommended replacing the SEG with a statutory Strategy and Policy Statement (“SPS”) which sets out the Government’s policy goals for the gas and electricity markets, the roles and responsibilities of Government, Ofgem and other relevant bodies, and the policy outcomes that Government considers Ofgem to have a particularly important role in delivering.²⁵ While the Energy Act 2013 (“EA 2013”) provides for an SPS to be established to replace the SEG, and despite consulting on a draft SPS in 2014,²⁶ the Government has taken no steps to bring the relevant sections into force.²⁷ There is therefore currently no SPS for the energy industry.
- 2.15 Ofgem is also subject to a number of statutory reporting obligations, and also publishes a number of discretionary reports and metrics. These are described more fully in Annex 1.

Sources of duties on energy companies

- 2.16 Under the Gas and Electricity Acts, certain activities involving gas and electricity may only be carried out pursuant to a licence granted by Ofgem.²⁸ Under the GA 1986 only the Secretary of State can make a determination that the activity is exempt from the requirement for a licence.²⁹ Licences are the primary source of obligations imposed directly on energy companies.³⁰

²² Section 4AA(5) GA 1986 and section 3A(5) EA 1989.

²³ Section 10 and section 14 UA 2000. See also “*Social and Environmental Guidance to the Gas and Electricity Markets Authority*”, 22 February 2018 (available at https://www.ofgem.gov.uk/system/files/docs/2018/02/letter_to_the_secretary_of_state.pdf). Ofgem does have an obligation to monitor and report at certain intervals on energy supply companies’ social programmes to help low income and vulnerable consumers including on clarity relating to eligibility, and qualitative assessment of effectiveness in the targeting of initiatives (see: <https://www.ofgem.gov.uk/ofgem-publications/74203/file37517-pdf>).

²⁴ See “*Social and Environmental Guidance to the Gas and Electricity Markets Authority*”, 22 February 2018.

²⁵ Ofgem Review, Final Report, July 2011, page 6 (available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/48134/215_1-ofgem-review-final-report.pdf).

²⁶ See: <https://www.gov.uk/government/consultations/strategy-and-policy-statement>.

²⁷ If brought into force, section 138(1) EA 2013 would repeal the SEG. Pursuant to section 132(1), Ofgem would then be required to have regard to the strategic priorities set out in any BEIS SPS designated as such under section 131 EA 2013.

²⁸ Section 5 GA 1986 and section 4 EA 1989.

²⁹ Section 6A GA 1989.

³⁰ The GA 1896 and EA 1989 also impose some obligations on energy companies directly. For example: an electricity distributor is under an obligation to make a connection between a distribution system and any premises when required to do so by either the owner or occupier of the premises or an authorised supplier

2.17 Table 2.1 below summaries the types of licences available in the gas and electricity industries and the licensable activities.³¹

Table 2.1
Description of gas and electricity licences

| Industry | Licence type | Description of licensed activities |
|-------------|------------------------------|---|
| Gas | Shipping | Arranging with a gas transporter for gas to be introduced into, conveyed through, or taken out of a pipeline system operated by that gas transporter. In all instances, the purpose of the gas movement should be general or for purposes connected with the supply of gas to premises. |
| | Transport | Conveying gas through pipes to any premises within an area authorised by the licence and conveying gas through pipes to any pipeline system operated by another Gas Transporter, or other pipeline system specified in the licence. National Grid Gas operates the overall transmission network for the Great Britain gas network. |
| | Supply | Supplying gas to any premises through pipes. A Gas Supplier Licence can allow supply to either: (i) domestic and non-domestic premises; or (ii) non-domestic premises only. |
| | Interconnector ³² | Participating in the operation of a gas interconnector, which is defined as: (i) co-ordinating and directing the conveyance of gas into or through a gas interconnector; and (ii) making such an interconnector available for use for the conveyance of gas. |
| Electricity | Generation | Generating electricity for the purpose of giving a supply to any premises or enabling a supply to be given. |
| | Transmission | Transmission means transmission by means of a transmission system. A “transmission system” means a system which: (i) consists (wholly or mainly) of high voltage lines and electrical plant, and (ii) is used for conveying electricity from a generating station to a substation, from one generating station to another or from one substation to another. ³³ National Grid Electricity Transmission plc (“NGET”) is the transmission owner (“TO”) of the onshore transmission system in England and Wales (the TO in the south of Scotland is SP Energy Networks and in the north of Scotland, the TO is Scottish and Southern Electricity Networks (“SSEN”)). Since 1 April 2019 (when it split with NGET) National Grid ESO Ltd has fulfilled the system operator role in Great Britain, which means that it is responsible for balancing the system and making sure that the supply of electricity meets the |

acting with the consent of the owner or occupier of the premises (section 16(1)(a) of the EA 1989); and gas transporters are under an obligation to develop and maintain an efficient and economical pipe-line system for the conveyance of gas and connect that system to any premises (section 9(1) of the GA 1986).

³¹ See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/licences/licensable-activities>.

³² Interconnectors provide the transmission capacity for electricity to flow between two countries, with power flowing to the market that has higher prices (i.e. if wholesale electricity prices are higher in Great Britain than in the rest of Europe, importing energy from the continent becomes rational). Great Britain currently has five electricity interconnectors which link it to Belgium, France, Ireland, the Netherlands and Northern Ireland. There is a pipeline of c. 12,000MW of projects proposed or under construction by 2025 and interconnectors form a major part of the UK National Grid’s strategy for the future. See: <https://www.ofgem.gov.uk/ofgem-publications/87961/electricityinterconnectorsfactsheet.pdf> and <https://www.theengineer.co.uk/power-sharing-building-worlds-longest-subsea-interconnector/>.

³³ See section 4 of the EA 1989.

| Industry | Licence type | Description of licensed activities |
|---------------------|---------------------------|---|
| | | demand on a second-by-second basis. ³⁴ |
| | Distribution | Distribution means to distribute by means of a distribution system. A “distribution system” is a system that consists (wholly or mainly) of low voltage lines and electrical plant and is used for conveying electricity to any premises or to any other distribution system. ³⁵ |
| | Interconnector | Participating in the operation of an electricity interconnector, which is defined as: (i) co-ordinating and directing the flow of electricity into or through an electricity interconnector; or (ii) making such an interconnector available for use for the conveyance of electricity. |
| | Supply | Supplying electricity to premises. An Electricity Supply Licence can be for supply to either: (i) domestic and non-domestic premises; or (ii) non-domestic premises only. |
| Gas and electricity | Smart Meter Communication | Providing a Smart Meter Communication Service within Great Britain. In particular, the licensee is responsible for providing the communications service to link smart meters in homes and small businesses with the systems of energy suppliers, network operators and energy service companies. In September 2013, the Smart Meter Communication Licence was granted to Smart DCC Limited. |

2.18 Gas and electricity companies are further subject to obligations imposed by environmental law, regulation and policy. Each of these sources are discussed in turn below.

Obligations imposed by licences

2.19 All licences contain standard conditions, which vary by industry and licence type, and list the conditions that licensees must abide by in order to undertake the relevant licensed activity. Among the topics covered by the standard licence conditions are an obligation to report on performance, an obligation to comply with core industry procedural documents and, in the case of suppliers, an obligation to encourage consumer engagement by asking domestic consumers to consider switching tariff or supplier.³⁶ Licences may also include special conditions that apply only to individual licensees alongside the standard license conditions. Special conditions are meant to provide additional regulatory protection or to promote competition, and are also used to set out the methodology for calculating allowed revenue under price controls. These special conditions may be revised or amended to apply to the individual circumstances of the licensee in question.³⁷

2.20 Energy licences stipulate that licensees must become a party to, and comply with, applicable industry codes and standards. These documents establish rules and governance for different aspects of the energy market, prescribe the terms for connection and access to energy networks, and can create contractual rights and obligations between the participants. Industry codes include e.g. the Uniform

³⁴ See: <https://www.energy-uk.org.uk/energy-industry/the-energy-market.html>.

³⁵ See section 4(4) of the EA 1989.

³⁶ See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/licences/licence-conditions>.

³⁷ Ofgem is currently consulting on certain special conditions of the electricity interconnector license held by the National Grid Interconnectors Limited and the electricity transmission license held by the National Grid Electricity System Operator, see here: <https://www.ofgem.gov.uk/ofgem-publications/164546>.

Network Code³⁸ (which sets out a legal and contractual framework to supply and transport gas in Great Britain³⁹) and the Balancing and Settlement Code (which defines the balancing mechanism and imbalance settlement processes of electricity in Great Britain). Each code is overseen by a panel or committee and Ofgem is empowered to make determinations and take enforcement action against companies in breach of the code.⁴⁰ Standards include the Security and Quality of Supply Standard for the electricity industry, which sets out criteria and methodologies for planning and operating the Great Britain Transmission System,⁴¹ and the Smart Energy Code, which provides for the governance of the end-to-end management of smart metering in gas and electricity.⁴²

Obligations imposed by the price reviews - overview

- 2.21 Network (transmission and distribution) electricity and gas companies are natural monopolies.⁴³ Ofgem uses price controls to regulate the amount that the network owners can charge for accessing their networks and to require them to invest in renewing and improving their network infrastructure.⁴⁴ Since they operate in competitive markets, there are no price controls for generators, and suppliers are subject only to the standard variable tariff and prepayment price caps. However, Ofgem continues to exercise oversight over their commercial activities.⁴⁵
- 2.22 Since 2013, Ofgem has set price controls for Great Britain's main electricity and gas networks using a performance-based model known as "RIIO", where network companies' revenues are set using incentives to deliver innovation and outputs (i.e. Revenue = Incentives + Innovation + Outputs). Within this framework, Ofgem sets

³⁸ Available at <https://www.gasgovernance.co.uk/UNC>.

³⁹ See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/industry-codes/gas-codes/uniform-network-code>.

⁴⁰ See: https://www.ofgem.gov.uk/system/files/docs/2017/10/enforcement_guidelines_october_2017.pdf at paragraph 2.5 and footnote 16.

⁴¹ See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/standards/security-and-quality-supply-standard-sqss>.

⁴² See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/industry-codes/gas-codes/smart-energy-code-sec>.

⁴³ Independent Distribution Network Operators ("IDNOs") own and operate smaller networks located within the areas covered by the DNOs. IDNO networks are typically extensions to the DNO networks serving new housing and commercial developments. There are currently 14 licensed IDNOs in the UK. IDNOs are regulated in the same way as DNOs, but do not have all of the conditions of the DNO licence. Rather, IDNOs are regulated via a "Relative Price Control" which requires IDNO charges to be capped for all customers at a level broadly consistent with the DNO equivalent charge (see: <https://www.ofgem.gov.uk/electricity/distribution-networks/connections-and-competition/independent-distribution-network-operators>). There are currently nine independent Gas Transporters ("IGTs"). They are also regulated via a "Relative Price Control". It is estimated that the number of consumers connected to IGT networks is around one million (<https://www.ofgem.gov.uk/gas/distribution-networks/connections-and-competition/independent-gas-transporters>). This does create a level of competition in respect of new network connections, although Ofgem has noted that competition has not developed in all areas in the market (see: <https://www.ofgem.gov.uk/electricity/distribution-networks/connections-and-competition/competition-connections>).

⁴⁴ See: <https://www.ofgem.gov.uk/regulating-energy-networks/why-and-how-we-use-network-price-controls/watch>. See also section 9 of the EA 1989 which requires electricity distributors and companies participating in electricity transmission to develop and maintain an efficient, co-ordinated and economical system of electricity distribution and to facilitate competition in the supply and generation of electricity.

⁴⁵ See: <https://www.ofgem.gov.uk/regulating-energy-networks/why-and-how-we-use-network-price-controls/watch>.

various targets including reliability, customer service and environmental performance in addition to determining the allowed revenues for the companies.⁴⁶

Current and upcoming price controls (RIIO-1 and RIIO-2)

2.23 A high level summary of the current RIIO-1 price controls and comparison against the RIIO-2 price controls (which are still in the consultation process) is provided in Table 2.2 below.⁴⁷

Table 2.2
High level summary of RIIO price controls

| Price control name | Industry description | RIIO-1 | | RIIO-2 | |
|-----------------------------------|--|-------------|-------------------------------|--------------------------|-------------------------------|
| | | Duration | Period | Duration | Period |
| Transmission (T) | High voltage electricity and gas transmission networks | Eight years | 1 April 2013 to 31 March 2021 | Five years ⁴⁸ | 1 April 2021 to 31 March 2026 |
| Gas distribution (GD) | Lower pressure gas transport to homes and businesses ⁴⁹ | | 1 April 2013 to 31 March 2021 | | 1 April 2021 to 31 March 2026 |
| Electricity distribution (ED) | Lower voltage electricity distribution to homes and businesses | | 1 April 2015 to 31 March 2023 | | 1 April 2023 to 31 March 2028 |
| Electricity system operator (ESO) | Operation of the electricity transmission system, including real-time balancing of demand and supply | N/A | N/A | | 1 April 2021 to 31 March 2026 |

Source: Ofgem

2.24 The RIIO-2 framework decision⁵⁰ (the “RIIO-2 Framework”) outlines Ofgem’s approach to setting price controls for Great Britain’s gas and electricity networks. Ofgem’s objective for RIIO-2 is “to ensure that regulated network companies deliver the value for money services that both existing and future consumers want”. Ofgem intends that the price controls will: (i) give due attention to mitigating the impact of

⁴⁶ See: <https://www.ofgem.gov.uk/ofgem-publications/53835/t1decisionoutput.pdf>.

⁴⁷ See: <https://www.ofgem.gov.uk/network-regulation-riio-model/current-network-price-controls-riio-1>.

⁴⁸ The ESO has a two-year business plan period from 1 April 2020 to 31 March 2023 for certain core elements of the price control, such as costs and outputs. See RIIO-2 Draft Determinations - Electricity System Operator, 9 July 2020 (available at https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_eso.pdf).

⁴⁹ This price control applies to companies who operate under a license to transport gas.

⁵⁰ RIIO-2 Framework, 30 July 2018 (available at https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf). This note does not discuss in detail the RIIO-2 electricity distribution framework decision (“RIIO-ED2”) 17 December 2019, updated 23 January 2020 (available at https://www.ofgem.gov.uk/system/files/docs/2020/01/riio-ed2_framework_decision_jan_2020.pdf). The high-level points in RIIO-ED2 are the same as those in RIIO-2.

networks on the environment; and (ii) be designed so that networks play a full role in addressing consumer vulnerability issues.⁵¹

- 2.25 Alongside the RIIO-2 Framework, Ofgem has developed and published sector-specific price control methodologies that apply to the gas and electricity transmission, gas distribution networks and electricity system operator price controls (“**RIIO-2 Sector Specific Methodology**”).⁵² The purpose of these is to ensure the outputs and incentives are appropriate to each industry and licensed activity.
- 2.26 On 9 July 2020, Ofgem published draft determinations for Transmission, Gas Distribution and Electricity System Operator which gave initial views on the outputs, incentives and allowed revenues for each company.⁵³ The final determinations are expected in December 2020,⁵⁴ together with the decision on the sector specific methodology for electricity distribution. For electricity distribution, the current price controls have an additional two years to run so the RIIO-ED2 process is still in its preliminary stages.

Obligations imposed by environmental and public health law, regulation and policy

The HSE’s involvement in the energy industry

- 2.27 Undertakings operating in the energy industry are subject to the general duties under the Health and Safety at Work etc. Act 1974 towards employees and members of the public, including a requirement to ensure that risks posed by their activities are as low as reasonably practicable. The primary regulator for these purposes is the HSE. The HSE has entered into a memorandum of understanding with Ofgem to ensure that there is sufficient co-operation, consultation and communication regarding risks to occupational and public safety in respect of the generation, transmission, distribution, supply and use of electricity and gas.⁵⁵ Under the Gas and Electricity Acts, Ofgem is required to consult with the HSE regarding broadly defined “gas safety issues” and “electrical safety issues”.
- 2.28 The HSE generally considers the electricity industry to be a lower risk industry and there is not a large body of legislation that is specific to the industry.⁵⁶ The HSE has

⁵¹ RIIO-2 Framework, page 4.

⁵² RIIO-2 Sector Specific Methodology - Core Document, 24 May 2019 (available at https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_core_30.5.19.pdf). In this context, this refers to the Core Document and, unless otherwise specified, does not refer to other sector specific methodologies.

⁵³ RIIO-2 Draft Determinations for Transmission, Gas Distribution and Electricity System Operator, 9 July 2020 (available at <https://www.ofgem.gov.uk/publications-and-updates/riio-2-draft-determinations-transmission-gas-distribution-and-electricity-system-operator>).

⁵⁴ See document entitled “Contingency Plans for RIIO-2”, 14 July 2020 (available at https://www.ofgem.gov.uk/system/files/docs/2020/07/riio-2_contingency_consultation_letter_2.pdf).

⁵⁵ See: <https://www.ofgem.gov.uk/ofgem-publications/77123/f-mouj-pdf>.

⁵⁶ The Electricity Safety, Quality and Continuity Regulations, impose duties to report certain incidents that may involve the safety of those not employed by the duty-holder, major supply interruptions, and domestic fatalities. These regulations also specify safety standards which are aimed at protecting the general public and consumers from danger, as well as power quality and supply continuity requirements to ensure an efficient and economic electricity supply service for customers.

identified risks relating to aged assets, the challenges posed by new technologies (in particular in the renewables industry) and industry fragmentation. However, initiatives such as the electricity network and generation industry’s “Powering Improvement”, which is primarily focused on occupational health and safety, have been commended.

- 2.29 In contrast, the gas industry is more heavily regulated by the HSE, primarily through the Gas and Pipelines Unit. Key legislation includes the Gas Safety (Management) Regulations 1996,⁵⁷ the Pipeline Regulations 1996,⁵⁸ and various HSE initiatives and programmes focused on gas safety, including the Iron Mains Risk Reduction Programme (the “IMRRP”).⁵⁹
- 2.30 From a consumer and customer safety perspective, the HSE manages the contract with Gas Safe Register (replacing the contract with Corgi) in respect of work carried out on gas equipment and pipes under the Gas Safety (Installation and Use) Regulations 1998.

Environmental law

- 2.31 The energy industry is subject to general environmental laws in respect of its operations, emissions (including permit requirements) and land use. For example, the industry is subject to the Environmental Permitting (England and Wales) Regulations 2016 and their Scottish equivalents, which control potentially polluting activities. Similarly, the Industrial Emissions Directive (2010/75/EU - preceded by the Large Combustion Plants Directive) regulates combustion industries.

3. TO WHAT EXTENT DOES THE EXISTING REGULATORY REGIME ALREADY PROVIDE FOR SUSTAINABILITY?

- 3.1 This section reviews the approach taken to considering issues of sustainability in the energy industry, by reference to the approach described in the definitional note, and considers the extent to which the existing regime provides for the achievement of the goals identified in that note.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/82784/GuidElectSafety_Quality.pdf.

- ⁵⁷ Applying to (i) the conveyance of natural gas through pipes to domestic and other consumers, covering the safe management of gas flow through a network, particularly those parts supplying domestic consumers, and a duty to minimise the risk of a gas supply emergency; (ii) arrangements for dealing with supply emergencies; (iii) arrangements for dealing with reported gas escapes and gas incidents; and (iv) gas composition.
- ⁵⁸ Principally concerned with pipeline integrity and aimed at securing safety in the design, construction, installation, operation, maintenance and decommissioning of pipelines. The regulations impose general duties in relation to all relevant pipelines and additional duties with regard to major accident hazard pipelines.
- ⁵⁹ The IMRRP has been designed to decommission all iron pipes within 30 metres of buildings within a 30-year period, with Ofgem and HSE considering the appropriate expenditure for this project. See: HSE, “A guide to regulation 13A of the Pipelines Safety Regulations 1996”, revised March 2013 (available at <https://www.hse.gov.uk/gas/supply/13a.pdf>) and <https://www.hse.gov.uk/gas/supply/mainsreplacement/enforcement-policy-2013-2021.htm>. Ofgem and the HSE will consider how consumer money on this project is best spent in light of Government’s net zero commitment while ensuring that public safety is not compromised (see: <https://www.ofgem.gov.uk/ofgem-publications/161061>).

Long-term intergenerational issues

- 3.2 We consider first the extent to which the legal and regulatory environment takes account of long-term and intergenerational issues. In particular, we consider the extent to which the relevant regimes provide incentives (or disincentives) to investment in long-term projects, the benefits of which are distant and uncertain - especially in the context of a price control period - given the parallel need to focus on the affordability of energy now.

RIIO-2 price controls

- 3.3 The fact that price controls are set for a limited period of time can make it harder for projects that take place over a longer timescale to be funded because there is inevitable uncertainty as to whether costs may be allowed in a subsequent price control period. Assumptions about asset lives, for example, are an important element of the regulatory settlement for energy companies and will often be longer than a single price control period. Appropriate and consistent assumptions in relation to asset lives are therefore needed to ensure that costs are spread fairly as between present and future customers.
- 3.4 The RIIO-1 price controls were relatively unusual in that they were set for an eight-year period. However, for RIIO-2, Ofgem has decided to reduce the duration of the price control period to five years, citing concerns about the loss of short run flexibility from a longer price control period.⁶⁰
- 3.5 There is therefore a trade-off to be made between short(er) run flexibility and the scope to provide funding certainty within the price control process for longer term projects. Whilst the difference between five and eight years is arguably not that significant in the context of very long-term investment, there is some risk that the five-year RIIO-2 period could (absent counter-measures) reduce focus on medium-to-long term projects focused on goals such as decarbonisation and wider environmental protection.
- 3.6 There are, however, a number of examples of energy companies investing in sustainability initiatives and projects with a long time horizon on their own initiative. National Grid, for instance, has conducted three feasibility studies on the potential role of hydrogen and how its networks could facilitate its uptake.⁶¹

Networks: asset renewal

- 3.7 Asset renewal has the potential to raise intergenerational concerns if the costs of renewal of assets with a long operating life is not evenly spread between different generations of customers. In its Sector-Specific Methodology, Ofgem notes that:

“[asset resilience is an] important part of the price control, because it contributes to a significant proportion of network companies’ totex and consumers could suffer

⁶⁰ Explaining its decision, Ofgem stated that: “[t]his forecast risk [pertaining to cost allowances and performance targets] is inherent in ex ante regulation. However, extending the price control to eight years with only a limited scope for an [mid-period review], limits our ability to reset certain cost allowances and output targets.” See paragraph 3.8 of the RIIO-2 Framework.

⁶¹ See page 13 of National Grid plc Annual Report and Accounts 2019/20, available at: <https://www.nationalgrid.com/document/133101/download>.

significant detriment if the pursuit of short term profits led to degradation of the quality of network assets. The consequences of such degradation would only become visible over much longer timeframes through interruptions to service or wider damages to public safety or the environment.”⁶²

- 3.8 Provision for asset renewal ahead of need is therefore important to mitigate these risks and ensure that costs are spread fairly across different generations of consumers. In the RIIO-2 Draft Determinations, Ofgem proposed allowing approximately £6 billion in funding to maintain, replace and repair ageing network assets, and further funding for network resilience.⁶³ Further, the Decarbonisation Programme Action Plan (the “Decarbonisation Action Plan”) states that: “[o]ur network price control framework requires network companies to take account of long-term requirements when maintaining and upgrading their assets. To fulfil these obligations, companies must invest, and nearly all network investment is in some sense anticipatory.”⁶⁴
- 3.9 There is nonetheless an unavoidable tension between the need for, and costs of, network renewal ahead of need, and the impact on prices for current consumers. Ofgem, for example, notes in its RIIO-2 Draft Determinations for electricity transmission that the industry must replace ageing assets while ensuring that costs to consumers are kept as low as possible.⁶⁵

Networks: anticipatory investment

- 3.10 Intergenerational concerns can also arise in relation to projects that are needed to deliver services in the future, meaning that customers now are therefore being asked to pay for benefits that will be enjoyed by customers in the future. Against the background of the significant additional investment that is likely to be required to deliver net zero, this seems likely to become an increasingly relevant consideration in the energy industry.
- 3.11 Ofgem has stated that it is encouraging network companies to invest in the infrastructure necessary to decarbonise, provided that they can demonstrate that this represents good value for consumers as “[s]uch anticipatory investment is already possible in our current regulatory structure. Recognising that there will be significant uncertainty about future needs, we will further develop our guidance to ensure that companies develop well justified proposals.”⁶⁶ The Business Plan

⁶² Sector-Specific Methodology, paragraph 6.3.

⁶³ RIIO-2 Draft Determinations, page 6. Further, in their RIIO-2 Business Plans, network companies were also expected to take a long-term view towards asset resilience. Companies were required to set out their views on asset health, criticality and replacement priorities at: (i) the start of the price control period; (ii) the end of the price control period with no intervention (i.e. the asset degradation); and (iii) the end of the period with intervention, as Ofgem expects “companies to explain their long-term risk objectives and strategy, as well as the long-term benefits delivered by their proposed interventions.” See the RIIO-2 Business Plan Guidance (13 October 2019), paragraph 2.18 (available at https://www.ofgem.gov.uk/system/files/docs/2019/10/riio-2_business_plans_guidance_october_2019.pdf) (“Business Plan Guidance”).

⁶⁴ See the Decarbonisation Action Plan (February 2020), page 17. Available here: https://www.ofgem.gov.uk/system/files/docs/2020/02/ofg1190_decarbonisation_action_plan_revised.pdf.

⁶⁵ See the RIIO-2 Draft Determinations - Electricity Transmission Annex (9 July 2020), para 1.8 (https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_et_sector_0.pdf).

⁶⁶ See the Decarbonisation Action Plan (February 2020), page 5.

Guidance that was subsequently published by Ofgem in August 2020⁶⁷ provides a framework to transmission and gas distribution companies that wish to propose highly anticipatory expenditure⁶⁸ in their business plans. To do so, companies need to address clearly a number of factors including: (i) what operational or capital solutions a company proposes investing in, if any; (ii) why, in the company's view, the investment is highly anticipatory in nature; and (iii) why investing now, rather than at some point in the future, will deliver benefits for current and future customers.⁶⁹

- 3.12 It is not the purpose of this note to assess the strengths and weaknesses of this approach, but we note that the issues associated with anticipatory investment appear to be recognised and there is no suggestion that the legal and regulatory regime is a barrier to these issues being addressed. However, it is also clear that there are difficult judgment calls to be made in terms of ensuring that the costs to current customers can be justified.
- 3.13 It is unclear to what extent Ofgem will provide ongoing guidance to energy companies and other stakeholders, including on investment in longer term projects and by setting interim decarbonisation targets between now and 2050.⁷⁰ The extent to which the Decarbonisation Action Plan will take into account the UK's five-yearly carbon budgets also remains unclear.⁷¹ There is therefore room for greater clarity over these issues which in turn may provide additional guidance on where the balance should be struck when considering anticipatory investment.

⁶⁷ See the Business Plan Guidance, paragraph 2.65.

⁶⁸ Ofgem distinguishes between "anticipatory" and "highly anticipatory" investments (although the qualitative distinction between the two is unclear). In its RIIO-2 Sector Specific Methodology Ofgem noted that: "[h]ighly anticipatory investment might include expenditure that is not proposed or allowed either because the need for or the benefit from the investment is relatively more uncertain than would normally be the case. This might include new approaches which offer better future option value, such as flexibility solutions, that may provide benefits over long-term asset solutions. These investments might however deliver significant value to consumers, and additional risk-sharing arrangements might be appropriate to unlock this value" (see paragraph 9.56).

⁶⁹ In their business plans, companies signalled that major anticipatory investments would be needed to achieve net zero. For instance, NGET proposed to invest in transmission-powered rapid EV charging on the motorway network and build loop circuits along the East Coast of England in anticipation of 40GW of offshore wind in the North Sea. See the RIIO-2 Draft Determinations, p. 82.

⁷⁰ This concern has already been raised by the Solar Trade Association which noted that the 18-month Decarbonisation Action Plan framework is "insufficient to provide the overarching, holistic approach toward decarbonisation that is needed. Ofgem must outline a clear, long-term strategy towards their role in achieving net zero 2050 with further detail on implementation." See: <https://www.solar-trade.org.uk/wp-content/uploads/2020/02/STA-Response-Ofgem-Decarbonisation-Programme-Action-Plan.pdf>. In addition, the CCC has reported that the UK is not currently on track to meet the fourth or fifth carbon budget and, in order to achieve its net zero target by 2050, the introduction of more challenging measures will be required. In order to meet its 2030 climate target (as set out in the fifth carbon budget in 2016), the UK will need to reduce CO₂ emissions by 57% by 2030, see: <https://www.edie.net/news/6/UK-carbon-emissions-hit-lowest-since-1888--but-nation-needs-to-more-than-double-reductions-to-hit-2030-target/>.

⁷¹ Carbon budgets were introduced in the UK in terms of Climate Change Act 2008, as amended in 2019. In 2019, the long-term climate objective of the carbon budgets was amended to reflect the UK's target of achieving net zero emissions by 2050. See an explanation of the carbon budgets here: <http://www.lse.ac.uk/granthaminstitute/explainers/what-are-carbon-budgets-and-why-do-we-have-them/>. See also paragraph 3.48 below. The carbon budgets, together, provide a sequential roadmap of a cost-effective road to net zero. The budgets are set 12 years in advance to provide policy-makers, investors and individuals with guidance (see: <https://www.theccc.org.uk/our-expertise/advice-on-reducing-the-uks-emissions/>).

Generation and diversity of supply

- 3.14 Significant investment is likely to be required in “green” or “low-carbon” energy generation and the scale of these projects means that they will require financing for some time ahead of becoming operational, raising considerations of intergenerational investment.
- 3.15 In November 2012, the Department of Energy and Climate Change published its Energy Security Strategy, which included the Electricity Market Reform package.⁷² This set out, amongst other things, proposals for Electricity Market Reform that were intended to help the UK move to a market model where low-carbon technologies are able to compete with conventional generation on price.
- 3.16 A central part of Electricity Market Reform was the Contracts for Difference (“CfD”) scheme, the successor to the Renewables Obligation.⁷³ CfDs incentivise investment in green generation by providing developers of low-carbon electricity generation projects (which often have high upfront costs) with predictable revenue streams under legally binding contracts with relatively lengthy durations (e.g. 15 years). Investors are protected from volatile wholesale prices and from the political risk of a change in Government subsidy policy during the construction period, and consumers are protected from paying increased support costs when electricity prices are high. The overall aim is to encourage open and competitive supply chains that will drive down the cost of low-carbon electricity generation over the long term.⁷⁴ The Government runs periodic CfD allocation rounds, encouraging developers to come forward with projects in different technologies (including emerging technologies that may be more expensive) through the use of different subsidy pots for established and less established technologies.⁷⁵
- 3.17 Hinkley Point C, for example, was funded using the CfD model.⁷⁶ This is the first new nuclear power station to be constructed in the UK since Sizewell B in 1988 and the first project to be run by a private company - NNB Generation Company Limited (“NNBG”). It has a projected lifetime of 60 years, but significant upfront construction costs. The Strike Price for the CfDs and other key terms were agreed in October 2013 and these provided the long-term pricing stability that was the basis for the overall financing structure.⁷⁷ The Government provided further support for the

⁷² The Energy Security Strategy is available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/65643/7101-energy-security-strategy.pdf.

⁷³ See: <https://www.gov.uk/government/collections/electricity-market-reform-contracts-for-difference> and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/233004/EMR_Contract_for_Difference_Contract_and_Allocation_Overview_Final_28_August.pdf.

⁷⁴ See: <https://www.cfdallocationround.uk/what-is-the-CFD-scheme>.

⁷⁵ The Government recently ran a consultation process ahead of the CfD Allocation Round 4 (AR4) - which it currently plans to open in 2021. See: <https://www.gov.uk/government/collections/contracts-for-difference-cfd-allocation-round-4>.

⁷⁶ This was on the basis of the Government’s Final Investment Decision Enabling programme, which was designed to enable developers of low-carbon electricity projects to take final investment decisions ahead of the CfD regime being put in place as part of Electricity Market Reform. See: <https://www.gov.uk/government/publications/increasing-certainty-for-investors-in-renewable-electricity-final-investment-decision-enabling-for-renewables>.

⁷⁷ “NNBG will receive £92.50 (in 2012 prices) for each megawatt hour (MWh) of electricity from HPC that it sells into the market for 35 years. NNBG will receive top-up payments if the market price is lower, which are ultimately paid for by electricity bill-payers. Conversely, payments will flow in the opposite direction if

arrangements in the form of a guarantee of compensation in the event of an early shutdown of the power station on political grounds, and a credit guarantee on bonds to be issued by the future operator of the plant. It is beyond the scope of this note to provide a detailed review of the Hinkley Point C financing arrangements and it is not clear that future projects would be structured in quite the same way.⁷⁸ However, this example illustrates the scale and scope of the State intervention that was required to enable this project, which raised issues that go well beyond the scope of the mainstream legal and regulatory regime.

- 3.18 Another area where Government intervention is likely to be required is in relation to the development of CCUS. In October 2019, the Government reaffirmed its commitment to deploying CCUS in the UK as part of BEIS's Clean Growth Strategy, but noted that CCUS is very expensive and cost reductions would be required before it could be deployed in a cost-effective manner in the UK.⁷⁹ Plans for the deployment of this technology are in the early stages, with Government consulting on different business models for CCUS. The preliminary view of Government is that it will proceed with an approach that combines upfront capital support and an industrial CfD.⁸⁰ Until the business model is clearer, however, investors may not be willing to invest significantly in carbon capture. Further, Government will need to address the ability of participants to access transport and storage solutions for captured CO₂. A recent report for BEIS produced by Element Energy noted that the uncertainty around the availability of transport and storage could lead to the risk of stranded assets with no alternative use.⁸¹
- 3.19 With respect to diversity of supply, interconnectors are an important mechanism through which the UK can decarbonise its electricity supply and meet its net zero targets because they allow the UK to access electricity generated in other countries through renewable sources.⁸² New interconnectors can both encourage investment in renewable energy generation (as surplus energy can be exported) and ensure greater

wholesale prices rise above the strike price" see: <https://www.regulation.org.uk/library/2017-NAO-Hinkley-Point-C.pdf>.

- ⁷⁸ See the BEIS consultation of 14 October 2019 on a RAB model for new nuclear projects: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825119/rab-model-for-nuclear-consultation.pdf.
- ⁷⁹ BEIS stated that: "*While we have explored ways to deploy CCUS at scale in the UK since 2007, the lack of a technological breakthrough to reduce the cost of CCUS and the cost structures and risk sharing that potential large-scale projects have demanded has been too high a price for consumers and taxpayers. It is clear from the relative lack of deployment of the technology that other governments have reached a similar conclusion*", see page 72 of its Clean Growth Strategy available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf.
- ⁸⁰ See "*Carbon Capture, Usage and Storage: A Government Response on potential business models for Carbon Capture, Usage and Storage*" (August 2020), page 9 available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909706/CCUS-government-response-business-models.pdf.
- ⁸¹ See "CCS deployment at dispersed industrial sites Element Energy for the Department for Business Energy and Industrial Strategy (BEIS)". BEIS research paper number 2020/030, August 2020, page 7 (available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/929282/BEIS_-_CCUS_at_dispersed_sites_-_Report_1_.pdf).
- ⁸² The Viking Link - for example - is a proposed interconnector between Denmark and the UK. Denmark is aiming for half of the electricity it uses to come from wind power by 2020.

security of supply (as electricity can be imported if demand surges or supply drops unexpectedly).

- 3.20 Brexit poses potential risks to the UK’s interconnector strategy, as in a no deal scenario the UK will no longer be part of the EU energy market, and UK market participants will have to acquire the necessary registrations to carry on cross-border energy trading from outside the EU. In this way, Brexit could make maintaining and expanding interconnectors more difficult, which would impact on UK electricity resilience in the long term. Ofgem has already made clear what its approach will be to the mechanics of interconnector trading in the event of a no-deal Brexit.⁸³

Conclusion

- 3.21 There is scope for intergenerational investment to be supported through the regulatory regime, in particular through the price control mechanism which encourages companies to invest in asset renewal and in long-term projects where the pay-off is often in the future and is sometimes uncertain. However, there are limits to the types of long-term projects that energy companies can undertake while still keeping the cost to current consumers low, and the major infrastructure development that is likely to be required to achieve net zero will require interventions above and beyond the mainstream legal and regulatory regime. A particular concern here is the need to manage political risk, since developers will want reassurance that any subsidies agreed to will be maintained during the life of their project.

People-centred services and localism

- 3.22 This section considers the extent to which the legal and regulatory regime promotes (or hinders) the ability of consumers and other stakeholders to express their preferences and concerns about how the energy industry is regulated. Additionally, we consider how the regulator is taking steps to protect consumers in vulnerable circumstances, and the impact of this on the pursuit of sustainability objectives.

Customer engagement and localism

- 3.23 There are a range of initiatives in relation to network companies that are designed to incentivise engagement with consumers - both by network companies and by Ofgem itself.

(a) Engagement by network companies

- 3.24 While Ofgem considered that incentivising network companies to undertake quality stakeholder engagement on their business plans in RIIO-1 was “*one of the key successes*”,⁸⁴ the regulator has indicated that it wants to see deeper and more sustained dialogue with stakeholders over the course of the entire price control period in RIIO-2.
- 3.25 RIIO-2 has therefore introduced an enhanced stakeholder engagement process with the stated intention of encouraging greater engagement and interaction with

⁸³ See: <https://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-ifa-nemo-link-britned-ifa2-and-eleclink-interconnectors-apply-event-uk-leaves-eu-without-deal>.

⁸⁴ RIIO-2 Sector Specific Methodology, page 15. See also RIIO-2 Draft Determinations paragraph 4.36.

consumers/community groups across the price control period.⁸⁵ The framework includes three elements:

- (i) The creation of **independent customer engagement/user groups** by each network company to scrutinise companies' business plans and provide assurance to Ofgem on the extent to which they reflect the needs and wants of consumers.⁸⁶ The groups are also expected to provide independent challenge on delivery against commitments in the business plans throughout the price control period.
- (ii) The creation of an **independently chaired RIIO-2 Challenge Group** to assess, scrutinise and challenge network companies' RIIO-2 business plans from the viewpoint of existing and future consumers, with particular focus on sustainability, affordability and the protection of customers in vulnerable circumstances. Ofgem expects the Challenge Group will have two roles - as both a challenger to energy companies on their business plans, and acting as a "critical friend" to Ofgem and challenging the regulatory framework where necessary.⁸⁷
- (iii) The introduction of **Open Hearings**, which have taken place online due to COVID 19, as an additional element of the price control process.⁸⁸

3.26 In its report on the RIIO-2 business plans, the RIIO-2 Challenge Group was optimistic that the increased engagement was having a positive effect and noted that "*the independent, in-depth challenge from these [customer engagement/user] groups has demonstrably improved the final plans, significantly so in some cases. Based on this experience, we are optimistic about the potential for the ongoing groups to help hold the network companies to account for performance and delivery throughout the period of the next price control.*"⁸⁹

3.27 An assessment of the impact of these initiatives is beyond the scope of this note but we have not identified any specific legal or regulatory impediment to network businesses engaging with stakeholders. The more significant constraint is likely to be

⁸⁵ Ofgem clarifies in the document "RIIO-2 Enhanced Engagement Guidance Document - Version 2" that references to "stakeholders" means individuals, organisations or communities that are impacted by the activities of the network companies (including existing and future consumers). Ofgem therefore expressly acknowledges as important not just the views of those individuals/organisations that consume energy, but also the perspective of the communities where the network companies are active. Ofgem hopes that by including community representation in customer engagement/user groups, business plans will better reflect a local context, priorities, expectations and needs.

⁸⁶ Distribution companies must establish Customer Engagement Groups while transmission companies and the Electricity System Operator must set up a User Group.

⁸⁷ See Ofgem's description of the Challenge Group here: <https://www.ofgem.gov.uk/network-regulation-riio-model/current-network-price-controls-riio-1/riio-1-forums-seminars-and-working-groups/consumer-challenge-group>.

⁸⁸ RIIO-2 Enhanced Engagement Guidance Document - Version 2, page 5. In October 2020, a series of online Open Meetings will be held *in lieu of* Open Hearings. See the RIIO-2 Draft Determinations, paragraph 3.11.

⁸⁹ RIIO-2 Challenge Group Independent Report for Ofgem on RIIO-2 Business Plans, 24 January 2020, page 22 (available at https://www.ofgem.gov.uk/system/files/docs/2020/01/riio-2_challenge_group_independent_report_for_ofgem_on_riio-2_business_plans.pdf).

around the time and resources for such engagement initiatives, particularly when conducted as an input into the overall business plan and price control review process.

(b) Engagement by Ofgem

- 3.28 In its Strategic Narrative for 2019-2023, Ofgem suggests that it is (in its view) currently more in touch with the views of the energy companies than consumers. Ofgem has therefore committed to do more to engage with households, micro-businesses, SMEs and large users - and their representatives.⁹⁰
- 3.29 Ofgem's main (and long-running) channel for engaging consumers is the Consumer First Programme. The purpose of this programme is to test customer views on specific policy questions or Ofgem's emerging thinking, rather than seeking to promote a better understanding of the issues and challenges facing specific categories of customers. In the RII0-2 Draft Determinations, Ofgem indicated its intention to hold a series of four webinars in August 2020 to enable stakeholders (particularly those with less technical knowledge of price controls) to better understand the RII0-2 Draft Determinations and the broader price control process.⁹¹ Webinars have been held in August 2020 on topics including net zero, finance and gas distribution.
- 3.30 In addition to engaging consumers directly, Ofgem appears to be open in principle to engaging with local elected officials and administrations to help build the infrastructure and make the regulatory changes needed to achieve the UK's net zero ambitions (although, particularly in current circumstances, there is pressure on the time and resources available to all parties). However, Ofgem notes there are limits on the extent to which funding can be provided through the price controls in response to specific local priorities. In the Decarbonisation Action Plan, it is stated:
- “Boundaries of network companies do not fit neatly with local and regional government structures. Where costs are socialised broadly within an area of democratic accountability, we may be able to support proposals for additional funding, for example through network price controls. But where funding needs to be cross subsidised from outside an area of accountability then the trade-offs may be different and our decisions will, where appropriate, need to account for this.”⁹²*
- 3.31 As with network companies therefore, there are no particular regulatory barriers to a broad approach to consultation with interested groups by Ofgem. The main constraints on Ofgem's ability to engage with local communities, consumers and other stakeholders appear to be limited resources. Additionally, Ofgem (as the national regulator) may not be well-positioned to respond to local needs through mechanisms like the price control. Local authorities may also have their own revenue raising powers and can fund projects directly, assuming their own legal framework allows for this.⁹³

⁹⁰ Our Strategic Narrative for 2019-2023, page 26 (available at <https://www.ofgem.gov.uk/system/files/docs/2019/07/our-strategic-narrative-2019-23.pdf>).

⁹¹ RII0-2 Draft Determinations, page 18.

⁹² According to the Decarbonisation Action Plan, page 15.

⁹³ In the Decarbonisation Action Plan, Ofgem notes that, *“Some local authorities are bringing forward decarbonisation ambitions and strategies that go further and faster than the UK government. Such local leadership could help GB as a whole to learn what works best and to develop supply chains. Local planning can*

*Protections for customers in vulnerable circumstances and redistribution**(a) Customers in vulnerable circumstances*

- 3.32 Ofgem’s Consumer Vulnerability Strategy translates its statutory duty with regards to customers in vulnerable circumstances into its regulatory approach.⁹⁴ In its inaugural Consumer Vulnerability Strategy, published in 2013, Ofgem defined a vulnerable consumer as one who is: (i) significantly less able than a typical consumer to protect or represent their own interests; or (ii) significantly more likely to experience detriment, or for that detriment to be more substantial.⁹⁵ In addition to the Consumer Vulnerability Strategy, the list of “risk factors” that Ofgem identifies as causes of (or things capable of exacerbating) vulnerability illustrates that Ofgem is willing to take an expansive approach to defining vulnerable customers.⁹⁶ This is consistent with the legal and regulatory regime which does not provide a restrictive definition of vulnerable customers (see paragraph 2.11 above).
- 3.33 The Consumer Vulnerability Strategy also noted that Ofgem has “pushed” energy companies to reduce disconnections due to debt - only 6 disconnections were for debt in 2018, compared to 640 in 2013.⁹⁷ Energy suppliers are only able to engage with a customer about a possible disconnection if that customer hasn’t engaged with the supplier about a debt for 28 consecutive days. Even then, suppliers are required to give customers the chance to repay the money through a payment plan or must ask to fit the customer with a prepayment meter. In addition, the SLC 0 (the Standards of Conduct) require that domestic suppliers must identify and understand the characteristics, circumstances and needs of vulnerable customers and satisfy themselves that their actions result in vulnerable consumers being treated fairly.⁹⁸
- 3.34 The Standard Conditions of the Electricity Supply License also requires that a licensee maintain a Priority Services Register (“PSR”) of its domestic customers who are vulnerable - including because of their Personal Characteristics⁹⁹ - and may require priority services. These priority services include putting in place mechanisms to

also help to develop the most appropriate pathways to decarbonisation - both through local buy-in of citizens and consumers and through better tailoring of solutions.” See page 15 of the Decarbonisation Action Plan.

- ⁹⁴ Consumer Vulnerability Strategy, October 2019, footnote page 7 (available at https://www.ofgem.gov.uk/system/files/docs/2020/01/consumer_vulnerability_strategy_2025.pdf).
- ⁹⁵ Ofgem retained this definition in its most recent Consumer Vulnerability Strategy, published in October 2019.
- ⁹⁶ Risk factors fall into three categories: (i) vulnerable characteristics, including literacy or numeracy difficulties, having a speech impairment and not speaking English as a first language; (ii) personal circumstances, including living alone, not having internet access and being a full-time carer; and (iii) wider circumstances, including living in a rural area, living off the gas grid and having a prepayment meter. See further Ofgem Consumer Vulnerability Strategy, October 2019, pages 59 to 60 (available at https://www.ofgem.gov.uk/system/files/docs/2020/01/consumer_vulnerability_strategy_2025.pdf).
- ⁹⁷ Consumer Vulnerability Strategy, page 9.
- ⁹⁸ The SLC 0 (and the SLC OA for non-domestic suppliers) are “enforceable overarching rules aimed at ensuring licensees [...] treat customers and microbusinesses fairly”. See Ofgem’s “Licence guide: Standards of Conduct”, page 1. Available at: https://www.ofgem.gov.uk/system/files/docs/2017/10/standards_of_conduct.pdf.
- ⁹⁹ Personal Characteristics means that the customer is: (i) of pensionable age; (ii) is chronically sick, has an impairment, disability or long-term medical condition; or (iii) has any other characteristic identified by the licensee as being relevant due to the nature of the Priority Services.

enable the reading of the customer’s electricity meter at appropriate intervals.¹⁰⁰ Similarly, the Standard Conditions of the Electricity Distribution License also require that a licensee maintain a PSR listing of all its “PSR Customers”.¹⁰¹ When a licensee needs to make a planned interruption in the supply of electricity to a PSR Customer’s premises, it must give that customer sufficient information and keep them informed about the interruption.¹⁰² Ofgem is also considering introducing a principle-based licence requirement on gas distribution networks relating to the treatment of vulnerable customers.¹⁰³

3.35 In the context of RIIO-2, Ofgem is requiring network companies to spend more on protecting customers in vulnerable circumstances and is encouraging network companies to coordinate with local policy makers on an ongoing basis to support the creation of shared Local Area Energy Plans. This is intended to ensure that “*the services delivered by network companies appropriately reflect the local priorities of consumers in the regions that they serve.*”

(b) Redistribution

3.36 Ofgem has pursued small-scale interventions to provide targeted support for customers in vulnerable circumstances, including:

- (i) a £30 million use-it-or-lose-it allowance to gas distribution companies in the RIIO-2 price control for programmes addressing consumer vulnerability (or CO safety) that go beyond business as usual;¹⁰⁴
- (ii) the introduction of a new licence condition that limits the amount suppliers are allowed to charge for prepayment meters installed under warrant; and
- (iii) the introduction of new rules into the supply licence to prevent suppliers from back-billing customers for energy used more than 12 months ago.¹⁰⁵

3.37 However, Ofgem has resisted calls to initiate or to pursue policies that have the purpose of levying significant costs or seeking significant redistribution of costs among consumers.¹⁰⁶ In public statements Ofgem has repeatedly made clear that wider

¹⁰⁰ See the Standard conditions of electricity supply licence, Condition 26.5. (Available here: <https://epr.ofgem.gov.uk/Content/Documents/Electricity%20Supply%20Standard%20Licence%20Conditions%20Consolidated%20-%20Current%20Version.pdf>.)

¹⁰¹ PSR Customers are domestic customers who are either: (i) of pensionable age, chronically sick, or live with children under five; or (ii) due to otherwise being in a vulnerable situation, are in need of additional services related to their access, safety, and communication needs.

¹⁰² The Standard Conditions are available here: <https://epr.ofgem.gov.uk/Content/Documents/Electricity%20Distribution%20Consolidated%20Standard%20Licence%20Conditions%20-%20Current%20Version.pdf>.

¹⁰³ See Our Strategic Narrative, page 16.

¹⁰⁴ See page 6 of the RIIO-2 Draft Determinations.

¹⁰⁵ See: https://www.ofgem.gov.uk/system/files/docs/2018/12/letter_to_the_secretary_of_state_on_social_and_environmental_guidance_2018.pdf and <https://www.ofgem.gov.uk/publications-and-updates/ofgem-bans-suppliers-backbilling-customers-beyond-12-months>.

¹⁰⁶ Ofgem Corporate Strategy, 18 December 2014, page 11 (available at https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/corporate_strategy_0.pdf).

redistribution projects are a matter for Government and that Ofgem is not democratically accountable for such decisions:

*“Our role is not to implement social tariffs, or drive further cross-subsidy between consumer groups. While some stakeholders would like us to do more, in our view this is not currently within our mandate.”*¹⁰⁷

- 3.38 By way of illustration, Cadent Gas identified fuel poverty as a priority sector in its business plan and proposed to take 36,500 customers out of fuel poverty during the RIIO-2 price control period, including by making 5,000 tailored interventions such as boiler installation or improving household insulation.¹⁰⁸ In its RIIO-2 Draft Determinations, Ofgem rejected these tailored interventions saying that funding would not be allowed for the installation of boilers and heating systems and/or energy efficiency measures through the price control because of the Government funding available for the installation of energy efficiency measures, first time central heating and boiler repairs and replacements.¹⁰⁹
- 3.39 Ofgem has also historically resisted the introduction of a broader price cap on standard tariffs on the basis that this was best introduced by legislation.¹¹⁰ The powers to establish price caps on default energy tariffs were eventually introduced through primary legislation in the Domestic Gas and Electricity (Tariff Cap) Act 2018 and came into force on 1 January 2019.
- 3.40 This delineation of responsibility between Ofgem and Government is consistent with how Government describes its role in the SEG (which was introduced to improve the alignment of the regulatory framework with Government strategy). These guidelines clarify that “[w]here the Government wishes to implement specific social or environmental measures which would have significant financial implications for consumers or for the regulated companies, these will be implemented by Ministers, rather than the Authority, by means of specific primary or secondary legislation.”¹¹¹
- 3.41 Notwithstanding this delineation, Ofgem does have responsibility for decision-making on issues where there can be significant distributional effects.
- 3.42 An example of this is the Targeted Charging Review (“TCR”), which is one of two reviews undertaken by Ofgem in 2019 to determine how the electricity network

¹⁰⁷ Our Strategic Narrative for 2019-2023, page 16.

¹⁰⁸ See Cadent Gas’s Business Plan for 2021 to 2026 entitled “Transforming experiences: Customers. Communities. Colleagues” (December 2019) page 60 (available at https://cadentgas.com/nggdwsdev/media/Downloads/business-plan/Cadent_BusPlan_PART3_Full-Plan_NC.pdf).

¹⁰⁹ See “RIIO-2 Draft Determinations - Cadent” (9 July 2020) page 29 and 31 (available at https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_cadent_annex_0.pdf).

¹¹⁰ See a Financial Times article called “Legislation needed to tackle UK power price rises, regulator warns” (17 August 2017) which stated that: “Mr [Dermot] Nolan pointed out that if parliament voted for a ceiling on the market’s most common energy tariffs ‘we would absolutely do our best to implement such a cap as effectively and efficiently as possible’. Legislating for an extensive energy price cap would be ‘the most effective way’ of implementing such a policy, he said, adding that ‘if we took such a decision [without legislation] ... there would be a substantive appeal route’ for the utility companies” (available at: <https://www.ft.com/content/bbd1f5be-826b-11e7-a4ce-15b2513cb3ff>).

¹¹¹ See “Social and Environmental Guidance to the Gas and Electricity Markets Authority”, June 2011, paragraph 22 (available at <https://www.ofgem.gov.uk/ofgem-publications/74203/file37517-pdf>).

charging could be modernised.¹¹² The TCR examined *inter alia* the “residual charges”,¹¹³ and concluded that - rather than these charges being linked to usage - residual charges should be recovered through a fixed charge for all household and business energy customers.¹¹⁴

- 3.43 Ofgem noted that the introduction of the new residual changes will benefit consumers overall - although some will pay lower changes and others will pay higher charges than today.¹¹⁵ Notwithstanding this conclusion, Ofgem noted that more targeted approaches, such as the retail market or wider policy solutions, would be better suited to mitigating any concerns with the effects of changes to the recovery of residual charges. Ofgem stated that “[Ofgem continues] to believe that the network charging structure is not the right vehicle to address vulnerability concerns because of the inability to target support accurately onto those consumers who most need it, and the inherent trade-offs involved.”¹¹⁶

Conclusion

- 3.44 There are a number of initiatives being undertaken by Ofgem not only to engage with consumers or stakeholders directly, but also to encourage network companies to do the same. There are no obvious regulatory barriers to a greater focus on engagement and people-centred services. However, there are likely to be resource constraints on the amount of direct engagement that can be undertaken, particularly within the context of a price control review, and there is a limit on the extent to which very local concerns can be addressed.
- 3.45 Similarly, the regulatory regime allows Ofgem to provide support for customers in vulnerable circumstances, but the delineation between the Government and Ofgem means that there may be legal and regulatory limits on the role that Ofgem can play. However, this does not mean that its regulatory duty to have regard to the interests of customers in vulnerable circumstances when performing its role is without purpose.

¹¹² Ofgem’s second review looked at “forward-looking” charges which send signals to users about the effects of their behaviour and encourages them to use networks in a particular way.

¹¹³ Residual charges are determined once the forward-looking charges have been calculated to recover the remaining “allowed revenue” set under Ofgem’s price controls i.e. the costs of investing in and operating the networks. See the “Targeted charging review: decision and impact assessment” (21 November 2019) (“TCR Impact Assessment”) (available here: https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf). The TCR also looked at the differences in charges faced by smaller distributed generators (or “embedded generators” which are connected to the distribution network rather than the high voltage National Grid) and larger generators (these differences are known as “embedded benefits”). It found that embedded benefits can increase costs for consumers and affect competition and should be removed.

¹¹⁴ While current network charges include forward looking charges designed to encourage people to use networks efficiently through price signals, residual charges are not designed to provide incentives to use networks in any particular way. If residual charges do provide incentives, this can distort competition between different network users and can lead to unfair outcomes. Demand for residual charges is currently based on demand usage over Triads (three points of time in the year when demand is at its peak), separated by ten clear days. Some users are able to predict the Triad periods and reduce their demand accordingly to reduce their residual charges. The remaining customers who are not able to vary their usage, will therefore have to pay higher residual costs. See: http://www.chargingfutures.com/media/1436/cf_tcr-summary-note-tcr-decision-march-2020.pdf.

¹¹⁵ See the TCR Impact Assessment, page 9.

¹¹⁶ *Ibid.*, paragraph 3.91.

It is clear that there is a range of areas in which Ofgem does have responsibility for policy choices where this duty can be engaged.

Environment and emissions

- 3.46 The UK Government (excluding Scotland, which has its own target) has committed to achieve net zero carbon emissions across the whole economy by 2050.¹¹⁷ This is similar to other European countries' targets, but the UK is, along with Germany and France, one of the biggest economies to make a 2050 commitment to date.¹¹⁸ It constitutes the first legally binding net zero commitment by a major economy.¹¹⁹
- 3.47 Clearly emissions are at the forefront of political discussions, and political support for decarbonisation has brought about significant changes in recent years, including ambitious legislative commitments to decarbonisation. This section therefore considers the extent to which the current legal and regulatory regime supports the delivery of these commitments.

Strategic direction for decarbonisation in the energy industry

- 3.48 The general legislative framework for decarbonisation is set out in the Climate Change Act 2008, as amended in 2019 (the "CC Act"), section 1 of which imposes a duty on the Secretary of State to reduce the net UK carbon account by 100% by 2050. The CC Act also sets out a duty on Government to issue five-year carbon budgets 12 years ahead of time and to comply with them, establishes the Committee on Climate Change (the "CCC") and makes provision for emissions trading schemes and climate adaptation reporting. Further, until the end of the Brexit implementation period, the UK remains a member of the EU Emissions Trading System. From 2021, the UK will maintain a parallel emissions trading scheme.¹²⁰ Ofgem is also explicitly required to protect consumers' interests in reduction of greenhouse gas emissions as part of its "principal objective".¹²¹ The legislative framework is therefore directed at the highest level towards the achievement of decarbonisation, albeit at the regulatory level this is seen through the lens of consumers' interests.
- 3.49 The decarbonisation of energy supply¹²² is the most obvious and pressing aspect of energy industry decarbonisation (and the reduction of greenhouse gas emissions more generally). At present the energy supply industry is responsible for about a quarter of

¹¹⁷ Section 1 of the Climate Change Act. Scotland has an earlier net zero target of 2045. See: <https://www.gov.scot/news/scotland-to-become-a-net-zero-society/>.

¹¹⁸ See: <https://www.weforum.org/agenda/2019/07/the-growing-list-of-countries-committing-to-a-net-zero-emissions-goal>.

¹¹⁹ See: <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law#:~:text=The%20UK%20today%20became%20the,80%25%20reduction%20from%201990%20levels>.

¹²⁰ The Greenhouse Gas Emissions Trading Scheme Order was made on 11 November 2020, and will take effect after 31 December 2020.

¹²¹ Section 4A(1A)(a) GA 1986 and section 3A(1A)(a) EA 1989.

¹²² i.e. emissions from electricity generation and other energy production activities such as mining, refining and manufacturing fuels.

UK carbon emissions (about 90 Mte in 2019).¹²³ However, other aspects of the industry are also crucial to decarbonisation, including most notably:

- (i) Heating, which is usually achieved by burning natural gas, supplied through the UK gas network.¹²⁴ Achieving net zero almost inevitably involves replacing natural gas heating with another method, whether electricity, waste heat collection, hydrogen or some combination of these.¹²⁵
- (ii) Electricity transmission and distribution capacity, which will have to grow to allow for electricity-based replacements to carbon-intensive activities - especially heating and electric cars - and will also have to adapt to and support increased microgeneration. The potential role of network companies in setting up and maintaining charging stations for electric vehicles will also need to be clarified.
- (iii) Ensuring that the electricity grid undertakes necessary investments to ensure that it operates optimally close to capacity as demand for electricity increases.
- (iv) Transmission and distribution, which will also have to adapt to new technologies, e.g. building an offshore grid to reduce the cost of new offshore wind farms, creating new infrastructure for electric vehicle charging, and becoming “smarter and more flexible”¹²⁶ to cope with intermittent generation and new sources of demand.

3.50 The Decarbonisation Action Plan sets out Ofgem’s vision of achieving net zero emissions in 2050, which addresses not only the energy industry but also surface transport and heat, as well as ancillary issues such as innovation and climate adaptation.¹²⁷ However, unlike the water industry (which has committed to net zero by 2030), Ofgem has not set out a commitment to achieve net zero in energy (or any part of the energy industry) before 2050.

Decarbonisation aspects of Ofgem’s price control

3.51 In the RIIO-2 Draft Determinations, Ofgem re-affirmed its commitment to net zero, saying that “RIIO-2 will prepare the regulated network companies to deliver Net Zero at lowest cost to the consumer, while maintaining world-class levels of system reliability.”¹²⁸ At the same time, investment in physical infrastructure is lengthy and costly, and diverts efforts away from other projects, as well as imposing potentially

¹²³ See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf.

¹²⁴ See “Decarbonisation Heat”: <https://www.energy-uk.org.uk/our-work/new-energy-services-and-heat/decarbonisation-of-heat.html>.

¹²⁵ This will have implications not just for the gas networks but also for homes and businesses who will have to have their boilers and heating systems replaced with systems that can be used with the new heating system, for example, by replacing domestic boilers with boilers that can burn hydrogen gas.

¹²⁶ See: <https://www.gov.uk/government/consultations/electric-vehicle-smart-charging/public-feedback/electric-vehicle-smart-charging-consultation-summary-of-responses>.

¹²⁷ Decarbonisation Action Plan.

¹²⁸ RIIO-2 Draft Determinations Core Document, paragraph 1.1.

significant costs on bill-payers.¹²⁹ In addition, the state of technology is rapidly changing on all fronts in an unpredictable manner, and shifts in consumer behaviour and Government policy could significantly change patterns of use.

- 3.52 As discussed at paragraphs 3.10 to 3.13 Ofgem has been reluctant to allow funding for investment that could turn out to be excessive or become redundant in light of changes in circumstances.¹³⁰ Ofgem has also remained cognisant of the effect that the path to net zero will have on consumer bills. Ofgem noted in its RIIO-2 Draft Determinations that the price control mechanisms “*will enable companies to achieve Net Zero targets where a needs case and value to consumers can be proven, while allowing Ofgem to exercise scrutiny over the spending to ensure that costs to consumers are kept as low as possible*”¹³¹ and that it will fund activities to allow decarbonisation only where “*there is a clear needs case to invest now*”.¹³²
- 3.53 It is possible that Ofgem may need to adopt a more flexible approach to investing in new technologies - even if it may become outdated - in order to achieve net zero by 2050. In particular, achieving net zero is likely to entail a very significant changes in domestic usage of gas, either to use hydrogen or to replace existing heating system with electric heating or district heating with a low-carbon heat source (see paragraph 3.49(i)). There is therefore a specific issue associated with the long-term future of gas distribution networks. If domestic gas consumption is to be phased out, then maintenance and renewal of gas network infrastructure will become increasingly uneconomical over time. On the other hand, it may be possible to use the gas distribution network to distribute hydrogen (which, depending on method of production, may be carbon neutral) and so the gas network may have an enduring role.
- 3.54 These types of uncertainties can be challenging to address through a price control that requires decisions to be made on a five-yearly basis. In the specific case of heat, Ofgem has committed to reviewing the future of gas infrastructure in light of Government policy decisions around heat decarbonisation, including the consideration of different options for hydrogen production in the short and longer term. Specifically, Ofgem has proposed a “heat policy re-opener” for the gas network RIIO-2 price control.¹³³ Another broader decarbonisation-focussed measure in RIIO-2 is the “net zero re-opener”, discussed in more detail in paragraph 3.70 to 3.72 below.

¹²⁹ This is because costs incurred by gas and electricity companies in implementing government policies are recouped from customer bills rather than from taxes.

¹³⁰ See e.g. Ofgem’s Strategy Decision for the RIIO-ED1 electricity distribution price control (4 March 2013) paragraph 2.6: “*The DNOs need to create a network that allows them to connect new customers without delays or service disruptions, but avoids investing in assets that may be redundant*” (available at <https://www.ofgem.gov.uk/sites/default/files/docs/2013/03/riioed1decoverview.pdf>); or Ofgem’s RIIO-1 consultation press release: “*To further safeguard consumers, Ofgem will only approve the further £5 billion where there is a demonstrable need for the infrastructure, therefore protecting consumers from paying for redundant assets*” (available at https://www.ofgem.gov.uk/sites/default/files/docs/2012/07/20120716_riio_press_release_1.pdf).

¹³¹ RIIO-2 Draft Determinations paragraph 2.21.

¹³² RIIO-2 Draft Determinations, page 5.

¹³³ In the Sector Specific Methodology for Gas Distribution, Ofgem noted that it will create a “Heat Policy” re-opener uncertainty mechanism, to respond to policy driven requirements for some or all GDNs to change their spending significantly during the RIIO-GD2 to support a transition to low-carbon heat. See the “RIIO-2 Sector

- 3.55 Outside of the price control process, Ofgem delivers Government support schemes that support the transition to low carbon, including the Smart Export Guarantee, Renewable Heat Incentive and the Warm Home Discount. That being said, Ofgem may lack strategic focus on energy efficiency - which is crucial to decarbonisation - perhaps because policy decisions relating to decarbonisation have traditionally been made by the Government.¹³⁴ Industry commentators have been critical of the fact that the UK does not have a national energy efficiency programme for homes and businesses.¹³⁵

Direct Government investment in low-carbon generation

- 3.56 In the past few years, the Government has committed to significant investment and has been a significant actor in terms of policy initiatives to support “green” or “low-carbon” generation capacity (see paragraphs 3.14 to 3.18 above). This includes measures in support of decarbonisation, such as encouraging new low-carbon generation and discouraging new carbon-intensive generation.
- 3.57 The investments in green energy and decarbonisation initiatives by Government are positive steps and this is likely to be a significant area of activity for Government on an ongoing basis, given that the market and regulatory regime alone are not going to be able to promote renewable energy projects to the extent required to meet net zero.
- 3.58 Examples of Government investment and measures taken outside of the Ofgem-led price control process include:
- (i) The Feed-in Tariffs Scheme (“**FiT Scheme**”) was introduced by Government on 1 April 2020. The FiT Scheme encourages organisations and individuals to install small-scale low-carbon electricity generation systems by paying a tariff for any electricity generated and, where applicable, an export tariff for any surplus electricity exported to the grid.¹³⁶
 - (ii) Investment in low-carbon energy including the Government’s investment of approximately £20 billion in the first new nuclear power station in decades - Hinkley Point C - in 2016 (see paragraph 3.17),¹³⁷ and the Offshore Wind Sector Deal published in 2019 which in turn led to the establishment of the Offshore Wind Growth Partnership.¹³⁸

Specific Methodology - Gas Distribution” (24 May 2019) paragraphs 3.62 and 3.63 (available at https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_gd.pdf).

¹³⁴ In Our Strategic Narrative for 2019-2023, Ofgem states that: “[t]raditionally, policy decisions relating to decarbonisation, including arrangements to support non-fossil fuel sources of generation, have been made by UK Government, with Scottish and Welsh governments setting their own decarbonisation targets. However, Ofgem has an important role in the way we administer government renewable and energy efficiency schemes and regulate the energy market in minimising the costs of the low-carbon transition”, page 22.

¹³⁵ See a report entitled “Energy efficiency’s offer for a net zero compatibility stimulus and recovery” (June 2020) (available at: https://www.theeeig.co.uk/media/1096/eeig_report_rebuilding_for_resilience_pages_01.pdf).

¹³⁶ See: <https://www.gov.uk/government/publications/2010-to-2015-government-policy-low-carbon-technologies/2010-to-2015-government-policy-low-carbon-technologies#appendix-8-feed-in-tariffs-scheme>.

¹³⁷ See: <https://www.gov.uk/government/collections/hinkley-point-c>.

¹³⁸ The partnership has been granted a budget of £100 million over a ten-year period and; “will promote closer collaboration across the supply chain, implement structured productivity improvement programmes and

- (iii) Promoting dynamic tariffs based on smart meters, where usage is recorded and relayed in near real-time and customers are alerted electronically about price drops to encourage them to consume electricity during demand troughs.¹³⁹ The Government is currently supporting a transition to smart meters, which will facilitate broader uptake of such tariffs, and Ofgem has considered the issue of supporting consumers to transition to time of use tariffs.¹⁴⁰

Coordination between stakeholders

- 3.59 As decarbonisation is a systemic economic change that affects all aspects of the economy, Ofgem’s coordination with Government and other bodies on decarbonisation is extensive. Ofgem works with the CCC and BEIS, and reports to DEFRA on adaptation to climate change pursuant to the CC Act.¹⁴¹ Further, the Oil and Gas Authority is leading the development of the UK CCUS industry, which is a critical part of the strategy to achieve the 2050 net zero target. Ofgem is working with the Oil and Gas Authority to develop and promote CCUS.¹⁴² It will be important for these authorities to collaborate in respect of the interaction between CCUS and ongoing offshore gas supply, as CCUS begins to be rolled out on a large scale.
- 3.60 Ofgem, meanwhile, is responsible for managing heat generation from gas or electricity, but not through other means. This potentially prevents the regulator from taking a more holistic view when it comes to decarbonisation, and makes cross-sector coordination even more crucial. A more unified approach (through engagement with a number of stakeholders including regulators, energy companies, and Government with a view to developing an economy-wide plan) will be required in order for the UK to achieve net zero by 2050. Ofgem will also need to work with Government and others to ensure the impacts of climate change on the energy system are given due consideration, in particular: (i) more frequent storms that can knock out energy networks; (ii) sufficiency of water to cool energy systems in a drought; and (iii) at a local level, balancing heat efficiency with the need for domestic ventilation.¹⁴³
- 3.61 There are also significant ancillary roles to be played by a number of other parts of Government, including Treasury, the Ministry of Housing, Communities and Local Government, the Department for Transport and local government,¹⁴⁴ each of which

facilitate shared growth opportunities between developers and the supply chain.” See: <https://owgp.org.uk/funding-success-for-7-uk-companies-in-offshore-wind-supply-chain-improvement-projects/>.

¹³⁹ See e.g., the Octopus offering: <https://octopus.energy/agile/>.

¹⁴⁰ See e.g. “Distributional Impact of Time of Use Tariffs” (2 May 2017) (available at <https://www.ofgem.gov.uk/ofgem-publications/119455>).

¹⁴¹ See “Adaptation to climate change report to Defra: Second round report 2016” (7 September 2016) (available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/566125/climate-adrep-ofgem.pdf).

¹⁴² See “Energy Transition: the OGA’s role Offshore Europe - September 2019” (available at https://www.ogauthority.co.uk/media/6019/oe_2019_energy_transition_kristina_dahlstrom.pdf).

¹⁴³ The Government may need to actively manage these risks post-Brexit. Currently, the EU strategy on adaption to climate change is managed by the European Commission. The strategy has a number of aims, including to promote more climate-resilience by promoting action by Member States (including publishing assessments of Member States’ national adaptation strategies), and taking “climate-proofing” action at the EU level. More information is available here https://ec.europa.eu/clima/policies/adaptation/what_en.

¹⁴⁴ See: <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>.

has already set out its decarbonisation plans.¹⁴⁵ The number of decarbonisation action plans across a number of departments suggests that there ought to be a broader and more coordinated assumption of responsibility for the climate crisis throughout Government - e.g. the Departments of Health and Education will have an important role in raising public awareness and engagement with emissions reduction - but, to date, there is limited evidence that this broader exercise in “climate mainstreaming” is underway.

- 3.62 The CCC has highlighted the need for the Government to promote consumer engagement in the path to net zero. The CCC noted:

“Breaking with previous messaging to households to make small and easy changes, high-impact shifts in consumer behaviours and choices are needed that are consistent with the scale of the climate challenge, build optimism and commitment, and give weight to new ambitious narratives that inspire wide public participation.”¹⁴⁶

Conclusion

- 3.63 The environment and emissions - and more specifically the decarbonisation agenda - are key priorities for the energy sector. Most of the ambitious programmes and investments are being led by Government, as the scale and scope of the investments required are beyond the ability of the regulatory framework to deliver. Government is also better placed to marshal the participation that will be required from every part of the economy. Ofgem also has a role in encouraging investments through the price control mechanism, both through providing funding and through enabling re-openers and other uncertainty mechanisms for decarbonisation initiatives.

Short-term flexibility

- 3.64 This section considers the extent to which the regulatory regime can respond to changes in the energy industry, for example, because of new technologies or changes in consumer behaviour. The pace and scale of change that must happen during the next price control period if the UK is to meet its net zero commitments will necessarily give rise to uncertain costs and place other pressures on the energy system.
- 3.65 The challenge for Ofgem is to limit any actual or perceived inflexibility in the price control that might prevent networks from playing their part in driving this essential change, or might lead to customers facing unnecessary costs. This must be done while maintaining: (i) the stability and predictability that has been the hallmark of utility regulation, enabling investors to invest with confidence in long-term assets;

¹⁴⁵ See e.g. the Treasury’s review of funding the net zero transition: <https://www.gov.uk/government/publications/net-zero-review-terms-of-reference/hm-treasurys-review-into-funding-the-transition-to-a-net-zero-greenhouse-gas-economy-terms-of-reference>; the MHCLG’s consultation on a Future Homes Standard: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852605/Future_Homes_Standard_2019_Consultation.pdf; and the DfT’s document setting out its approach to decarbonising transport: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/de-carbonising-transport-setting-the-challenge.pdf.

¹⁴⁶ See the report for the CCC entitled “Behavioural change, public engagement and Net Zero” (October 2019), page 5 (available at: <https://www.theccc.org.uk/wp-content/uploads/2019/10/Behaviour-change-public-engagement-and-Net-Zero-Imperial-College-London.pdf>).

and (ii) the possibility of outperformance by network companies. As noted in paragraphs 3.2 *et seq.*, Ofgem must balance the need for short-term flexibility to allow the industry to respond to changes and rapid development, against the need for long-term investments and the impact of these large-scale investments on the environment and future consumers. In this section, we consider the extent to which the regulatory regime tries to strike this balance by allowing network companies to respond to changes in the industry, through re-openers and other uncertainty mechanisms.

Length of the price controls

- 3.66 As discussed in paragraphs 3.3 to 3.4, by lengthening the price control period Ofgem can incentivise networks to take a longer term view on areas such as investment and innovation, but this must be weighed against potential negative impacts on short term flexibility and regulatory certainty.
- 3.67 The tension between securing competing objectives is apparent from Ofgem’s decision in RIIO-2 to revert back to a five-year price review. This reflects the speed with which the energy market is moving (e.g. regarding consumer behaviour and new technologies) and the difficulty of predicting the allowances necessary for a range of different activities.¹⁴⁷

Re-openers

- 3.68 Re-openers are a type of uncertainty mechanism used to decide, within the price control period, on additional allowances (or a reduction in allowances) required to deliver a project or activity once there is more certainty on the needs case, project scope or quantities, and costs.¹⁴⁸ During RIIO-2, companies will be expected to deliver various outputs identified at the outset of the price control using allowed revenues.
- 3.69 Generally, Ofgem does not change output targets or revenue allowances during the price control period unless it has made provision in the price control for a known uncertainty.¹⁴⁹ This reflects the fact that the price control is intended to provide a level of certainty for customers, investors, and the regulated companies. Frequent re-opening of the price control settlement could reduce incentives on companies to innovate and seek to beat the regulatory settlement. However, Ofgem recognises that it is critical for price controls to enable the gas and electricity networks to support the achievement of net zero targets. However, because net zero policy may not develop in tandem with the RIIO-2 timetable, changes related to the net zero policy may result in price control assumptions under RIIO-2 (and subsequent price controls) ceasing to be appropriate.¹⁵⁰ In such cases, it may be necessary to make

¹⁴⁷ Paragraphs 3.8 and 3.9 of the RIIO-2 Framework. Ofgem noted in paragraph 3.8 that “[i]n RIIO-1, we have already observed that things have turned out differently from the assumptions made at the time of setting the price control.” Ofgem recognised in the RIIO-2 Draft Determinations that the five-year price control period may disincentivise some innovation that does not deliver short-term benefit to customers, paragraph 8.75.

¹⁴⁸ RIIO-2 Draft Determinations, paragraph 7.4.

¹⁴⁹ RIIO-2 Draft Determinations, paragraph 8.17.

¹⁵⁰ RIIO-2 Draft Determinations, paragraph 8.18.

adjustments during the period, rather than waiting until the next price control review.

- 3.70 Consequently, Ofgem has proposed a new “net zero re-opener” with the aim of balancing the need for investor confidence with the need to respond flexibly to technological and policy developments along the path to net zero.¹⁵¹ The net zero re-opener allows for changes connected to the achievement of net zero, and not otherwise captured by other RIIO-2 mechanisms, to be made.¹⁵² Ofgem is proposing that it will have the sole ability to initiate the net zero re-opener (although stakeholders would have the option of drawing to their attention issues that they believe are relevant), and intends to apply the same materiality threshold as it will to the other RIIO-2 re-openers (see below).¹⁵³ However, the net zero re-opener is limited to the reduction of greenhouse gas emissions, and not the promotion of broader sustainability goals (such as reducing other pollutants or the protection of vulnerable ecosystems).
- 3.71 The net zero re-opener is only one of the uncertainty mechanisms used in RIIO-2 for the purpose of introducing flexibility during the price control. Others include: (i) the “Heat Policy” re-opener discussed in footnote 133; (ii) the smart meter rollout re-opener that will provide gas distribution networks with an opportunity to recover efficient costs directly incurred as a result of the smart meter rollout programme;¹⁵⁴ and (iii) volume drivers to adjust allowances in line with actual volumes where the volume of certain types of work that will be required over the price control is uncertain.¹⁵⁵ Ofgem is also considering various mechanisms to fund “decarbonisation expenditure” for the ED2 price control.¹⁵⁶
- 3.72 The fact that the proposed re-openers in RIIO-2 that relate to sustainability are more extensive than in RIIO-1 suggests that Ofgem is attempting to do more to enable short-term flexibility in the current price review.¹⁵⁷ However, the thresholds for the

¹⁵¹ *Ibid.*

¹⁵² Decarbonisation Action Plan, page 16.

¹⁵³ RIIO-2 Draft Determinations, pp 88 and 89. The types of changes that could be made to a network company’s licence through the re-opener process could include: (i) the increase or decrease in allowed revenue; (ii) adjustment to existing output targets or the introduction of new output arrangements; and (iii) changes to existing reporting requirements or the introduction of new reporting requirements.

¹⁵⁴ *Ibid.*, page 144.

¹⁵⁵ See para 5.4 of the RIIO-2 Draft Determinations.

¹⁵⁶ See Ofgem’s “Open Letter Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)” (6 August 2019) “[t]he expenditure and outputs that we expected DNOs to deliver in RIIO-ED1 reflected the key services that they provide (reliability, connections, customer service etc.). We have previously focussed on these type of activities, which are within the control of DNOs to deliver and are directly linked to network services, rather than the achievement of wider outcomes linked to decarbonisation targets for energy, transport and heat. In light of decarbonisation goals, however, there may be reasons to more directly link DNOs’ revenues to the achievement of outcomes that go beyond the delivery of traditional network services [...] In response to previous RIIO-related consultations, we have received suggestions as to how regulation should change to better achieve these goals”, page 6. Available at: https://www.ofgem.gov.uk/system/files/docs/2019/08/open_letter_consultation_on_the_riio-ed2_price_control.pdf.

¹⁵⁷ In RIIO-1, re-openers are focussed on specific, identified cost categories, such as physical site security and asset health where total expenditure is unknown when the price controls were set. There are two windows during which adjustment allowances can be proposed. See: <https://www.ofgem.gov.uk/publications-and-updates/consultation-riio-1-price-control-reopeners-may-2018>.

re-openers have not yet been finalised, and if set too high this will reduce the benefits that can be obtained from this additional regulatory flexibility. In addition, it may be difficult for network companies to show that solutions either could not be delivered under the current framework, or could not have been foreseen during the business plan stage. Re-openers are also not without their own challenges: unless tightly defined they can lead to poorer outcomes for customers by undermining the incentive regime that is at the heart of the price control model. The fact that the net zero re-opener can be triggered at any time during the price control period could also increase uncertainty for investors.¹⁵⁸

Conclusion

- 3.73 There are no *per se* restrictions on the ability of energy companies to implement changes during the price control period - including adopting new (and potentially more sustainable) technology. However, there is limited scope for adjustment of the price limits that are set at the start of each five-year period meaning that incentives to make short term changes may be weaker unless they are cost-lowering. The uncertainties that are associated with the pursuit of net zero may be addressed to some extent through the net zero re-opener. However, the re-opener that is currently envisaged is much broader in scope and timing that has historically been the case. There is therefore a potentially significant trade-off being made off; any changes to the regulatory regime that allow greater scope for changes within price control periods could lead to greater uncertainty of income, and therefore may make energy companies a less attractive investment.

Investment in innovation

- 3.74 High level messaging from Government and Ofgem indicates that both are supportive of the principle that investment in innovation has a role in promoting sustainability. For example, BEIS's Clean Growth Strategy¹⁵⁹ describes investment in innovation as a “*core part*” of the Government's approach to decarbonising the UK's economy, and Ofgem believes that “[*m*]oving from a largely centralised, carbon-intensive model to one which will be increasingly carbon-constrained, smart, flexible and decentralised is creating challenges which can only be addressed by innovation.”¹⁶⁰
- 3.75 This section considers the extent to which the existing regulatory framework creates opportunities to promote sustainability through investment in organisational and technological innovation, including by embedding a culture that encourages speculative investment in unproven technologies without fear of failure (for additional considerations, see paragraph 3.24 of the definitional note). This set of issues is likely to be particularly pronounced in respect of transformative innovation

¹⁵⁸ Ofgem has indicated that its aim with the re-opener is “*to balance the need for investor confidence with the need to respond flexibly to technological and policy developments along the path to Net Zero.*” See para 8.16 of the RIIO-2 Draft Determinations.

¹⁵⁹ The Clean Growth Strategy (October 2017) page 49 (available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf).

¹⁶⁰ See CEO's Foreword to Ofgem's report on Innovation and Regulation, 7 December 2016 (available at https://www.ofgem.gov.uk/system/files/docs/2016/12/ofgem_innovation_and_regulation_final2.pdf).

and large-scale implementation projects; they are explored below in the context of network companies, which are likely to undertake these types of projects.

RIIO price controls

- 3.76 The price regulation process places no limit in principle on the forms of innovation that network companies can pursue, whether in the form of deploying new technologies, new operational processes or new commercial arrangements. The move to analysing “totex” on a holistic basis aims to avoid distortions of incentives by rewarding companies equally for spend on capital or operational measures. One aim of this is to encourage companies to look for alternative solutions rather than just traditional capex. However, innovation can create challenges for regulatory models. Ofgem has noted that it may need to make trade-offs between investment in innovation and securing the interests of its consumers now: “*As the market changes we need a regulatory framework that both supports innovation and allows us to respond promptly to any emerging consumer protection issues.*”¹⁶¹

Innovation stimulus programme

- 3.77 There are some types of innovation that network companies are not incentivised to invest in under a standard price control regime because a regulator is unlikely to allow funding (and companies may struggle to justify the use of shareholder funds). Examples include high-risk innovation projects which companies and regulators may consider too risky to pursue, projects where the payback period is too long, or projects where the full benefits of the innovation are not directly delivered to companies (which is the case with decarbonisation).¹⁶² RIIO-2 (building on schemes developed in RIIO-1 and previous price controls) therefore includes a specific innovation stimulus package to incentivise investment on innovation that might not otherwise be delivered under the core RIIO framework.
- 3.78 As in RIIO-1, Ofgem will fund smaller-scale process or technological innovations through the Network Innovation Allowance (“NIA”). The NIA funding aims to fill a gap in the price control which would deter networks from being more innovative on energy system transition or customer vulnerability.¹⁶³ Network companies have described the stimulus as “particularly necessary” to encourage spending on earlier-stage research projects which would not otherwise happen under the price control.¹⁶⁴
- 3.79 For larger scale projects, Ofgem will replace the Network Innovation Competition (“NIC”) (which under RIIO-1 had the aim of incentivising spending on larger and more

¹⁶¹ See Our Strategic Narrative 2019-23, page 7.

¹⁶² RIIO-2 Draft Determinations, paragraph 8.75.

¹⁶³ In the RIIO-2 Draft Determinations, Ofgem states that “[w]e propose that all projects must focus on the energy system transition or addressing consumer vulnerability in order to be eligible for NIA funding. Other innovation projects, for example those aiming to improve operational efficiencies, should be funded as part of network companies’ BAU activities”, see paragraph 8.82.

¹⁶⁴ RIIO-2 Sector Specific Methodology, paragraph 10.48. Under the RIIO-2 Draft Determinations:

- commercially available technologies will not be eligible for the NIA in the RIIO-2 price control period, page 99; and
- network companies are expected to fund lower-risk innovation as part of their business as usual activities, paragraph 8.85.

complex transformational projects) with the Strategic Innovation Fund (“SIF”).¹⁶⁵ The purpose of the SIF is to “[t]o ensure a greater degree of alignment between network innovation and other publicly funded innovation to support the transition to [net zero].”¹⁶⁶ Eligible projects will be strategic projects that would not otherwise be taken forward as business as usual activities by companies or via NIA funding. This could include projects that expand the range of possibilities for decarbonising heat infrastructure, such as hydrogen.¹⁶⁷ The SIF will focus on collaborative projects between network companies and third parties.¹⁶⁸

- 3.80 Under the NIC, recipients of funding had to grant other networks a perpetual royalty free licence to Intellectual Property Rights (“IPR”) created pursuant to an NIC project, including any IPR subsisting in the project’s outputs.¹⁶⁹ The IPR-related requirements for SIF funding have not yet been published, but Ofgem has noted that several SMEs and trade bodies have made reference to “*barriers within the current framework, such as requirements to share intellectual property, which limit third party involvement.*”¹⁷⁰ If Ofgem pursues meaningful promotion of third-party-led projects, therefore, it will need to get third party buy-in to the rules on licensing IPR with respect to the SIF.
- 3.81 Unlike RIIO-1 - which contained the innovation roll-out mechanism re-opener to facilitate the roll-out of proven innovations into business as usual - RIIO-2 will not include a specific mechanism directed at barriers to progressing proven innovation to broad acceptance and scaling. This is arguably consistent with the reduction in the price control period, and Ofgem is encouraging companies to roll out proven innovation using their totex allowances. However some respondents to the RIIO-2 Sector Specific Methodology consultation argued that it will continue to be difficult to roll out proven innovations, especially those that do not deliver financial efficiencies for the individual network company.¹⁷¹

¹⁶⁵ RIIO-2 Draft Determinations, paragraph 8.40. The principle of using competition and targeted funding to drive innovation has been widely adopted by regulatory authorities, including in rail and telecoms in the UK and by the Australian energy regulator. More recently, Ofwat has based aspects of its new innovation competition on Ofgem’s NIC, see Ofwat’s Innovation and Funding Competition Consultation, May 2020 (available at https://www.ofwat.gov.uk/wp-content/uploads/2020/05/Innovation_Consultation_2020.pdf).

¹⁶⁶ RIIO-2 Draft Determinations, page 92.

¹⁶⁷ See: <https://www.ofgem.gov.uk/publications-and-updates/ofgem-proposes-25-billion-transform-great-britain-s-energy-networks>. The scope of funding will apply to projects where: (i) the assets of a network company are essential; or (ii) in the case of third-party innovators, the innovation would not happen but for the provision of the SIF funding. See the RIIO-2 Draft Determinations, page 91.

¹⁶⁸ The RIIO-2 Draft Determinations state in paragraph 8.54 that: “[t]o ensure collaboration between network companies and third parties, we propose that the Innovation Challenges will impose requirements relating to the composition of consortiums and project partnerships that bid in for funding, where appropriate.” Innovation Challenges which will be set by Ofgem, will be measures against which companies are expected to bring forward network innovation projects.

¹⁶⁹ See “Gas Network Innovation Competition Governance Document” (1 February 2013) which noted that “[a]ll other Network Licensees will have the automatic right to use Relevant Foreground IPR for use within their network royalty-free”, para 9.12 to 9.20. (Available at: <https://www.ofgem.gov.uk/sites/default/files/docs/2013/02/gas-nic-governance-document.pdf>). See too “Electricity Network Innovation Competition Governance Document” (2 April 2013) para 9.12 to 9.20. (Available at: https://www.ofgem.gov.uk/sites/default/files/docs/2015/04/elec_nic_-_final_clean.pdf).

¹⁷⁰ RIIO-2 Sector Specific Methodology, paragraph 10.76.

¹⁷¹ *Ibid.*, paragraph 10.25.

- 3.82 Outside of the price control, some Government bodies also provide for funding in the energy industry, including through the Energy Systems Catapult.¹⁷² The Energy Systems Catapult is an independent, not-for-profit centre that assists companies in developing testing and scaling their ideas. It has recently called for expressions of interest from UK energy firms to work with Catapult or Japanese or Spanish partners on innovative development ideas.¹⁷³

Conclusion

- 3.83 Overall, there are no legal or regulatory barriers to investment in innovation as such: indeed, it is clear that the regulator and Government recognise the benefits of innovation in the energy industry. However, under the basic regulatory model, energy companies (particularly network companies) may not always have strong incentives to invest in high-risk or long-term projects. It is beyond the scope of this note to assess the effectiveness of the various initiatives but we note that the energy industry appears to us to have more developed thinking than in some other utilities industries on how to fill this gap.

Collaboration

- 3.84 The energy industry, like other utilities industries, operates on a network basis. Collaboration is important as promoting new technologies and shifting to green energy benefits from knowledge sharing between network companies. This section considers how far the legal and regulatory regime promotes collaboration between network companies and whether it creates opportunities for collaboration with third party actors. It also considers the extent to which competition law may be perceived by networks as a barrier to collaboration.

RIIO -2

- 3.85 During the consultation process for RIIO-2, there was widespread agreement that companies should commit to do more innovative business as usual activities as part of RIIO-2, although there was some disagreement about the type of innovation that companies should finance themselves. Some respondents highlighted that, if companies finance innovation using their own money within a competitive environment in which network companies' performances are relatively assessed, there could be less collaboration between companies, as well as a greater focus on short term projects that would deliver quick financial efficiencies.¹⁷⁴
- 3.86 A further issue arises in relation to collaboration between companies at different levels of the supply chain. NIA funding is received as an allowance via the price control settlement which means that it can only benefit network licensees or third parties that collaborate with a network licensee. As such, the price control does not directly incentivise third parties to collaborate with network companies on NIA projects, although there may be other drivers for doing so, e.g. to advance research

¹⁷² As one of its strategic objectives, Catapult Energy Systems support UK innovators in respect of testing and commercialising new processes, products, services and business models for the energy industry (see: <https://es.catapult.org.uk/about-us/>).

¹⁷³ Innovate UK is investing £1 million to fund UK businesses leading collaborative R&D projects under the Eureka programme - see: <https://es.catapult.org.uk/impact/bid-opportunities/japan-and-spain-eureka-bids/>.

¹⁷⁴ RIIO-2 Sector Specific Methodology, paragraph 10.13.

or to explore potential commercial applications which might be monetised in the future.

- 3.87 However, Ofgem has stated its intention to instil a culture of constructive collaboration between network companies while wanting all consumers to benefit from innovations that have been paid for by consumers at large. In the RIIO-2 Draft Determinations, for example, Ofgem has proposed that, in order to ensure that SIF funding leads to collaboration between network companies and third parties, “*the Innovation Challenges will impose requirements relating to the composition of consortiums and project partnerships that bid in for funding, where appropriate.*”¹⁷⁵

Effect of competition law

- 3.88 As is the case in the water industry (see paragraphs 3.49 to 3.51 of the water note), it has been suggested that competition law may be seen as limiting the extent to which network companies are willing to collaborate for fear that any such agreements could breach competition law (even where the risk is very low). This is likely to be particularly relevant for companies that need to collaborate with direct competitors, but should be a less acute concern in relation to the monopoly activities of network companies. The consequences of breaching competition laws (even inadvertently) can be high, as arrangements between competitors that are found to breach the provisions on cartels can expose both companies and individual participants to significant sanctions. As a result, companies may take the view that the risk of a competition law infringement outweighs the potential benefit of collaboration - although in reality there is significant scope within the existing framework of competition law to engage in sustainability-enhancing collaborative efforts.
- 3.89 This (potential) chilling effect is heightened by the fact that it is often difficult for companies to obtain positive statements from regulators that conduct does not infringe competition law.¹⁷⁶ This is therefore an area where there is scope for competition law to develop to allow companies more easily to access positive confirmation that their proposed conduct will not attract competition law penalties, thereby reducing the risk of collaboration - and the fact that the energy industry has a specialist regulatory with concurrent powers in relation to competition law may mean that there is increased scope for specific guidance to be given.
- 3.90 Furthermore, the view that competition law should not stand in the way of sustainability goals has been gaining traction, having recently even been voiced by a judge of the UK Competition Appeal Tribunal.¹⁷⁷ Ofgem itself has also made strong

¹⁷⁵ RIIO-2 Draft Determinations, paragraph 8.54. Ofgem will set the Innovation Challenges against which it expects companies to bring forward innovation projects (RIIO-2 Draft Determinations, page 92). These challenges will likely be set around a range of network issues associated with the future of heat, power, transport, and the wider industry (RIIO-2 Draft Determinations, paragraph 8.49).

¹⁷⁶ The short-form opinion process that is operated by the Competition and Markets Authority (“CMA”) to give guidance on certain types of arrangement is rarely used and, as it is a public process, is not suitable for all types of arrangements.

¹⁷⁷ See: https://events.concurrences.com/IMG/pdf/simon_holmes_article.pdf. See also recent commentary from Jordan Ellison <https://ssrn.com/abstract=3542186>.

statements on collaboration between network companies in respect of innovation activities.¹⁷⁸

- 3.91 The COVID-19 crisis has led to a number of collaborative efforts between network companies – particularly with a view to protecting energy customers and ensuring security of supply. SSEN published a statement in March 2020 assuring its customers that it was working closely with other network operators and trade associations to ensure that it is “*sharing best practice and taking the necessary actions to ensure that [SSEN focusses] on activity that safeguards supply.*”¹⁷⁹ Network companies and other market participants (such as power generators) have also been collaborating with the ESO to prepare for any voltage issues that could arise as a result of the drop in demand for electricity and electricity supply.¹⁸⁰

Conclusion

- 3.92 Our analysis suggests that while there is broad support for increased collaboration, the regulatory regime does not (outside of the SIF) have mechanisms to actively promote collaboration between network companies, or with non-regulated companies. Further, the individual nature of the price control process and the focus on comparative competition could be seen as a limitation on the extent to which network companies are willing or able to collaborate (although conversely, because individual targets are set for the five-year price control period, collaboration can bring energy companies short-term gains).
- 3.93 We have not identified specific examples of competition law acting as a barrier to collaboration but competition concerns (whether well-founded or not) could serve as an additional barrier to collaboration in this area, particularly for companies that face direct competition.

Concluding remarks for section 3

- 3.94 Whilst the existing regulatory framework takes sustainability into account, in discharging its duties, Ofgem must continually make trade-offs including between: (i) keeping consumer bills affordable and promoting innovative, long-term investment (see paragraphs 3.7 to 3.9 and paragraph 3.51); and (ii) adhering to a duty to protect vulnerable customers and leaving policies with a wider distributional effect to Government (see paragraphs 3.36 to 3.40). Ofgem also has a degree of discretion about the weight or emphasis that should be given to certain priorities over others (although its principle duty is to protect the interests of existing and future consumers).

¹⁷⁸ In the RIIO-2 Draft Determinations, Ofgem states at paragraph 8.78 that “*Additionally, one of the purposes of the RIIO innovation stimulus is to enable companies to work together and consider the challenges that the industry as a whole is facing. We were disappointed that companies’ plans for NIA innovation funding were largely independent of each other, even though we encouraged collaboration on innovation activities and challenged companies to demonstrate that successful innovation is being diffused across the energy sector.*”

¹⁷⁹ See: <https://www.ssen-transmission.co.uk/news-views/articles/2020/3/covid-19-protecting-our-customers-our-colleagues-and-our-network>.

¹⁸⁰ See: <https://www.nationalgrid.com/uk/stories/community-spirit/powering-uk-through-pandemic>.

- 3.95 Further, there are no significant legal barriers to regulated companies promoting a sustainability agenda themselves. There are however financial constraints which place limits on what can be achieved on an individual, shareholder-led basis.
- 3.96 Lastly, the scale of investment required to meet the Government’s net zero targets fall outside of scope of what is achievable by Ofgem within the regulatory framework. While Ofgem can play a role in decarbonisation (e.g. through the net zero reopener), this is relatively minor in comparison to potential Government-led initiatives. As our analysis shows, meeting the UK’s net zero objectives is strongly reliant on the Government having the political will to continue to provide adequate funding to initiatives promoting decarbonisation.

4. WHAT COULD BE DONE, FROM A LEGAL PERSPECTIVE, TO FACILITATE ACHIEVEMENT OF SUSTAINABILITY OBJECTIVES?

- 4.1 Based on the analysis above, we believe that there is already scope within the current legal and regulatory arrangements for more to be done to encourage sustainability initiatives if that were agreed as a policy objective. In our view, the most significant barrier to substantial change in companies’ support of sustainability relates to funding and incentives through the regulatory framework.
- 4.2 There are examples of steps being taken within the regulatory regime to support sustainability initiatives, including through the price control process - see for example the net zero and other re-openers (paragraphs 3.70 to 3.71 above). However, it seems that there can be issues with securing recognition through the price control for (i) anticipatory, long-term investment where the future need is not yet clearly defined (see paragraphs 3.10 to 3.13 above); (ii) funding to respond to very localised priorities (see paragraphs 3.30 to 3.31 above); (iii) investment in high-risk, innovative projects (see paragraph 3.83); and (iv) policies that might be seen as having a distributional element (see paragraphs 3.30 to 3.31).
- 4.3 There are also some areas where the scale and scope of the changes that are required - in particular on decarbonisation - mean that it would be unrealistic to expect these to be delivered through the mainstream regulatory regime. There is therefore a clear role for Government in these areas to incentivise sustainability-driven initiatives beyond the current regulatory regime.
- 4.4 Our analysis also suggests that the regime does not impose significant constraints on the ability of companies to pursue sustainability initiatives of their own, in the sense that it does not raise formal legal barriers to doing so. Indeed there are a number of examples of companies choosing to prioritise, and to fund from their own resources, initiatives that are directed at sustainability goals (see paragraph 3.6 above). However, there may be a resourcing/prioritisation issue in that energy companies will need to focus on delivery of their legal obligations as a priority, and there will be limits on what can be achieved on an individual, shareholder-led basis, particularly where co-ordination is required or where there is uncertainty as to future regulatory intentions that may impact on decision making.
- 4.5 Some level of constraint is also likely to arise as a result of core directors’ duties. Corporate law requires directors to “*promote the success of the company for the*

benefit of its members as a whole”, while having regard to the interests of other stakeholders.¹⁸¹ The ongoing debate about shareholder primacy and the interests of stakeholders and long-term value (particularly in a business, ownership and financial model that has been designed by its owners, typically, to produce a consistent yield) has implications for companies’ ability to make decisions that promote sustainability at the expense of shareholder return in circumstances where these two objectives do not align. Whilst this is an evolving area, and across the economy there has been increasing interest in the purposeful business agenda, the board risks shareholder dissatisfaction and even (*in extremis*) litigation under company law for getting the balance wrong.¹⁸² The pull from investors in terms of Environmental, Social and Governance (“ESG”) factors is also relevant here (particularly when it is driven by activity from initiatives such as the Task Force for Climate Related Financial Disclosures), and is increasing companies’ focus on these issues.

- 4.6 However, in our view, if the aim is to help energy companies to do more to pursue a sustainability agenda then the area to focus on is funding and incentives. How far this is taken is not primarily a legal question. For companies that are subject to price controls, the most important aspects of the price control framework are not expressly provided for in Gas and Electricity Acts; rather, they reflect policy choices made by Ofgem. As with the water industry (see paragraph 4.5 of the water note) there is no legal barrier to extending or shortening the length of the price review (as Ofgem has already done in RIIO-2 - see paragraphs 3.66 to 3.67 above) or including an option for an interim “mini-review” of the current terms. Through the ongoing RIIO-2 process, a range of proposals have been put forward by companies and stakeholders as to how the price control could place a stronger emphasis on sustainability. However, there is an unavoidable tension within this process in terms of balancing the desire for short-run flexibility and responsiveness, with the need to provide certainty and stability of pricing, which is important to the ability of regulated companies to raise finance to fund investment.
- 4.7 In addition, the RIIO price controls only apply to certain activities within the energy industry. Beyond the price control process, other steps that could be considered by Ofgem and/or Government to increase the emphasis placed on sustainability include:
- (i) Setting intermediate (non-binding) sustainability-related targets for the energy industry and instituting regular reporting on progress in achieving these goals. This would allow both Ofgem and external stakeholders (including investors who are interested in ESG factors or Impact Investing) to monitor energy companies’ performance in areas such as decarbonisation and emissions, customer service and fulfilment of social obligations. This could also help to develop Ofgem’s reporting on sustainability-related themes and Ofgem could commit to producing commentary on this topic at least once a

¹⁸¹ See Companies Act 2006, section 172. The UK Corporate Governance Code also requires “large” companies to produce a statement which describes how the directors have had regard to the matters set out in section 172(1)(a) to (f) when performing their duty under section 172. “Large” companies includes private and AIM companies that meet at least two of the following criteria: turnover of more than £36m; balance sheet total of more than £18m; more than 250 employees.

¹⁸² Companies can, with appropriate authority and support from shareholders, amend their Articles of Association which can change the effect of section 172 - see e.g. Anglian Water’s recent decision to embed a “public purpose” into its Articles: <https://www.anglianwater.co.uk/news/anglian-water-becomes-first-water-company-to-embed-public-interest-at-its-core/>. We are not aware of any examples of energy companies having amended their Articles of Association in this way.

year, perhaps as part of its annual state of the market or report on vulnerable consumers.¹⁸³

- (ii) Offering more guidance to energy companies on practices to adopt in order to pursue sustainability initiatives and to give public, proactive support for measures that have proven to be effective.
- (iii) Placing emphasis in policy documents on the central role that the energy system plays in helping to tackle climate change and doing more to communicate how RIIO and Ofgem's other policy initiatives fit within wider Government policy with respect to protecting the environment and controlling climate change.
- (iv) Working with energy companies and consumer bodies to facilitate meaningful public engagement with Government and energy companies on sustainability issues.¹⁸⁴
- (v) With respect to the antitrust law chilling effect referred to in paragraphs 3.88 to 3.90, regulators could publish guidance or "safe harbours" for certain kinds of collaboration that could help to allay these concerns (either in the form of informal guidance or formal legal exemptions). Recent statements by European antitrust regulators (including the CMA) relating to collaboration to ensure fair distribution of scarce products during the COVID-19 pandemic provide some examples of what might be possible in this area.¹⁸⁵
- (vi) Appointments to the Governmental bodies responsible for regulating/enacting policies for the energy industry (including GEMA/Ofgem) could place a greater emphasis on building expertise on sustainability issues. For example, one or more board seats could be allocated to individuals with proven expertise in sustainability matters. The appointment process could further be structured in a manner that would allow the scientific community and sustainability-focused civil society to provide the Government with a list of suggested names, or be consulted on possible appointments. Ofgem could recommend a similar approach in respect of the boards of energy companies.
- (vii) Maintaining participation, alongside energy companies, in the international dialogue around these issues, so that all parties have access to the most

¹⁸³ Pursuant to the UA 2000, GEMA must: (i) consult on and publish a Forward Work Programme which sets out Ofgem's main objectives and estimated expenditure for the year; and (ii) produce an annual report to the Secretary of State explaining Ofgem's activities and any interventions by the CMA. Ofgem also publishes annual reports on: (i) the state of the energy market; (ii) customers in vulnerable situations in the retail energy market; and (iii) an annual performance report for each of the electricity and gas transmission and distribution network price controls. Ofgem also publishes supplemental data and interactive charts on key monitoring themes through the Ofgem Data Portal.

¹⁸⁴ The CCC has identified how meaningful public engagement is needed to inspire and mobilise mainstream participation in clean energy solutions, adoption of technologies and change behaviours. See "*Net Zero - the UK's contribution to stopping global warming*" report by the CCC, May 2019, page 194 <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf>.

¹⁸⁵ See: https://ec.europa.eu/competition/ecn/202003_joint-statement_ecn_corona-crisis.pdf and, from the CMA: <https://www.gov.uk/government/publications/cma-approach-to-business-cooperation-in-response-to-covid-19/cma-approach-to-business-cooperation-in-response-to-covid-19>.

accurate and up-to-date knowledge that is available at the time and international best practice can be shared.

- (viii) Increasing Ofgem’s role in supporting decarbonisation of the wider economy. As noted in paragraphs 3.36 to 3.40, the Government has taken a proactive role in promoting green energy and decarbonisation initiatives. Given the scale of investment and cross-sector coordination required, this is appropriate Government intervention. Nonetheless, Ofgem is well placed to provide insights on these initiatives and their potential role in them.
- (ix) Ensuring transparency in GEMA’s decision making and governance processes is also important. As noted above in paragraph 3.94, the regulator will necessarily have to prioritise certain objectives over others. Showing how key policy decisions are arrived at will help stakeholders understand these trade-offs and may help to increase engagement with the regulatory process going forward.

4.8 Alternatively (or in addition), consideration could be given to whether the general duties of Ofgem and the Secretary of State in the Gas and Electricity Acts should be amended to give a higher priority to sustainability issues - for instance:

- (i) The principal objective duties could be amended to broaden the focus from “consumer” concerns to also address “citizen” concerns.¹⁸⁶
- (ii) Ofgem’s principal objective could be revised to include a specific decarbonisation duty or its current duty to consider the reduction of greenhouse gases as an element of the consumer interest could be given more prominence and strengthened, for example by making clear that this should be prioritised above other considerations and/or linking it to emissions targets set out in the Climate Change Act 2008 and any subsequent change to the Government’s net zero commitment. Ofgem could also be given a clearer duty to have regard to advice from the CCC and the National Infrastructure Commission.
- (iii) Any other permutations of changes to general duties that would give greater prominence to sustainability goals and help Ofgem to adopt a fair focus on the path to net zero.

4.9 In the context of paragraph 4.8, the legislature could consider consolidating Ofgem’s duties to gas and electricity consumers into one act or policy document. It is possible that by broadening Ofgem’s focus, the regulator might be able to look across the gas and electricity industry when taking the interests of the consumer into account.

4.10 Government could also use its existing powers to put in place an SPS¹⁸⁷ to clarify and provide transparency around Government’s strategic priorities for the energy industry and to give guidance to Ofgem on the policy outcomes it should seek to achieve when carrying out its regulatory functions. The Government could supplement the SPS with additional “nudges” to increase the level of focus on sustainability and improve

¹⁸⁶ This is not entirely unprecedented, as the Office of Communications has obligations to “citizens” and not to “consumers” (albeit the telecommunications sector is very different from the energy industry).

¹⁸⁷ The Energy Act 2013 introduced legislation to provide for an SPS. See paragraph 2.14.

regulatory alignment with Government policy more broadly - e.g. the Government could be required to produce an energy industry sustainability policy statement. This strategic statement could also set out the roles and responsibilities of Government, Ofgem and other regulatory bodies which could in turn provide greater confidence in the consistency and coherence of regulatory decisions.

- 4.11 Whatever approach is taken, the key tension that will need to be resolved at a policy level is that (with the exception of short-term cost-saving innovation) increased spending by energy companies on sustainability issues is likely to lead to increased prices for consumers in the immediate term - even where it may reduce the cost of energy in the long term. It will therefore be important that there is strong public and Government consensus on the need to push for more sustainable measures in the energy industry.

Annex 1 to the energy note: GEMA's/Ofgem's reporting obligations

1. Pursuant to the UA 2000, GEMA must:
 - (i) Consult on and publish a Forward Work Programme prior to the start of each financial year. This document sets out the principal activities which Ofgem has planned for the forthcoming year and should outline the main objectives of each of these projects. Ofgem must also provide an estimate of its overall expenditure for the year.¹⁸⁸
 - (ii) Produce an annual report to the Secretary of State as soon as practicable after the end of each financial year, explaining Ofgem's activities and any interventions by the CMA during the year in respect of any references made by Ofgem.¹⁸⁹ Among the topics to be covered are an update on the activities described in the Forward Work Programme and a general survey of developments in respect of matters falling within the scope of Ofgem's functions including, in particular, developments in competition between persons active or connected to the gas and electricity industries.
2. Although it is not required to do so by law, following a recommendation made by the CMA in the final report in its Energy market investigation, Ofgem now reports annually on the state of the energy market ("State of the Market Report"). The recommendation arose from the CMA's finding about a lack of effective communication concerning the forecast and actual impact of Government and regulatory policies on energy prices and bills, leading to an erosion of trust between stakeholders.¹⁹⁰ The report provides analysis on: (i) competition in energy markets; (ii) affordability and vulnerability in the domestic sector; (iii) decarbonisation of energy; and (iv) security of Great Britain's energy supply. In the 2019 State of the Market Report Ofgem included a new fifth section on the performance of energy networks.¹⁹¹
3. Among the other discretionary reports and metrics published by Ofgem are:
 - (i) An annual report on customers in vulnerable circumstances in the retail energy market.¹⁹² The report considers the extent to which customers in vulnerable circumstances are experiencing positive outcomes in the retail energy market. While Ofgem is not legally required to publish the report, Ofgem views monitoring as a key part of its work to protect the interests of consumers. Energy suppliers' licence conditions require them to submit data to Ofgem on their performance in relation to their social obligations on a

¹⁸⁸ Section 4 UA 2000.

¹⁸⁹ Section 5(1) UA 2000. Ofgem's Annual Report 2018-2019 is available at https://www.ofgem.gov.uk/system/files/docs/2019/07/annual_report_and_accounts_2018-19_web.pdf.

¹⁹⁰ CMA, Energy Market Investigation Final Report, June 2016, page 76 (available at <https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf>).

¹⁹¹ See: <https://www.ofgem.gov.uk/publications-and-updates/state-energy-market-2019>.

¹⁹² See: <https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/protecting-and-empowering-consumers-vulnerable-situations/consumer-vulnerability-strategy/consumer-vulnerability-strategy-reporting-progress>.

quarterly or annual basis.¹⁹³ Ofgem collates this data to inform its report. It also publishes data on social obligations as part of its work to make the energy market as transparent as possible.¹⁹⁴

- (ii) An annual performance report for each of the electricity and gas transmission and distribution network price controls, which includes Ofgem's key findings on network companies' delivery and performance under RIIO-1. This report is based on the performance reports that the transmission and distribution network operators are required to submit to Ofgem.¹⁹⁵ Ofgem also publishes supplemental data and interactive charts on key monitoring themes through the Ofgem Data Portal.¹⁹⁶

¹⁹³ This includes information about disconnection rates, payment methods and non-financial support for consumers in vulnerable situations.

¹⁹⁴ See: <https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/protecting-and-empowering-consumers-vulnerable-situations/consumer-vulnerability-strategy/consumer-vulnerability-strategy-reporting-progress>.

¹⁹⁵ See: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/licences/licence-conditions>.

¹⁹⁶ See: <https://www.ofgem.gov.uk/regulating-energy-networks/current-network-price-controls-riio-1/riio-1-annual-performance-reports?page=1#block-views-publications-and-updates-block>.

Legal and regulatory
aspects of sustainability in
the telecoms industry



1. INTRODUCTION

- 1.1 Sustainability First has asked Slaughter and May to consider the interaction between sustainability, law and regulation in different utilities sectors. Slaughter and May has already prepared notes on the definition of sustainability and on the implications of the current legal and regulatory regime for the pursuit of sustainability initiatives in the water and energy industries. This note seeks to apply the learning from those notes to the telecommunications (“telecoms”) industry. The aim is not to replicate the analysis in the earlier notes, but rather to carry out a high level assessment of the extent to which similar - or different - considerations might apply when considering sustainability issues in a telecoms context.
- 1.2 Section 2 of this note gives a high level overview of the structure of regulation of the telecoms industry. Section 3 discusses some key areas of focus for sustainability in the telecoms industry. A reader who is already familiar with the structure of the regulatory regime may wish to proceed straight to Section 3, and refer back as necessary to the relevant parts of Section 2. This note should be read in conjunction with the note on the definition of sustainability that is referred to above, which explains the framework that is used for the analysis in section 3.
- 1.3 This note does not cover broadcasting (including broadcast infrastructure) or the sustainability issues that might be raised for the telecoms sector in the context of its interaction with the planning regime, land access rights, construction and health. It also does not consider the important role of the telecoms industry in enabling decarbonisation in other parts of the economy.
- 1.4 The views expressed in this note are those of Slaughter and May alone, and do not necessarily reflect the position of Slaughter and May’s clients or any other person. Slaughter and May’s involvement in Sustainability First’s project is limited to the provision of advice on the legal context and background to specific issues. We have not participated in, or been consulted on, the wider aspects of the project, nor on any conclusions that Sustainability First may reach, which are outside the scope of our work.
- 1.5 This note is for general information only and is not intended to offer policy or legal advice, or recommend any course of action, and it may not be relied on by any person other than Sustainability First. To the extent permitted under applicable law or regulation, Slaughter and May excludes all liability (howsoever caused) to anyone other than Sustainability First for any loss or damage relating to the use of this note. Nothing in this note nor the delivery of it to anyone other than Sustainability First shall create or constitute a solicitor-client (or any other fiduciary) relationship between Slaughter and May and a third party.

2. OVERVIEW OF THE REGULATORY REGIME FOR TELECOMMUNICATIONS

Institutions involved in the regulation of the telecommunications industry

- 2.1 At the highest level, the Department for Digital, Culture, Media and Sport (“DCMS”) sets the overarching strategic and policy direction for the telecoms industry in the UK in order to deliver the Government’s objectives.¹ Where necessary, it uses its legislative powers to achieve these aims. DCMS is the sponsoring department for the Office of Communications (“Ofcom”), the UK’s regulatory authority for broadcasting, telecommunications and postal industries in the UK.² Ofcom has primary responsibility for the design and implementation of regulatory policy for the telecoms industry.
- 2.2 Under the Communications Act 2003 (the “Communications Act”), the Secretary of State has the power to publish statements of the Government’s strategic priorities for telecommunications,³ and Ofcom has a statutory duty to have regard to any such statements in carrying out its functions and must publish an annual review of its progress against such priorities.⁴
- 2.3 The Communications Act provides that Ofcom has two over-arching duties: (i) to further the interests of citizens in relation to communications matters; and (ii) to further the interests of consumers in relevant markets, where appropriate by promoting competition.⁵ These duties underpin Ofcom’s more specific statutory objectives, which include securing the optimal use of the electro-magnetic spectrum, ensuring the availability of a wide range of electronic communication, maintaining sufficient media plurality, and protecting the quality and diversity of broadcast content.⁶ Ofcom’s duties are unusual, when compared to other regulators, in that they are not limited to “consumer” interests but also refer to the interests of “citizens”.⁷

¹ For more information on the DCMS, see a description on its website here:

<https://www.gov.uk/government/organisations/department-for-digital-culture-media-sport/about>.

² In 2004, Ofcom replaced the Office of Telecommunications (“Ofcom”) together with four other regulatory bodies covering broadcasting and radio spectrum, thereby becoming a “converged regulator”. Its postal mandate began in 2011. A consideration of the regulation of postal services is outside the scope of this note.

³ The current statement, published on 29 October 2019, is available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/842918/SSP_-_as_designated_by_S_of_S_.pdf. The priorities outlined are: world class digital infrastructure; furthering the interests of telecoms consumers; secure and resilient telecoms infrastructure; and universal postal service.

⁴ Sections 2A and 2B of the Communications Act 2003. The latest review is included in Ofcom’s Annual Report at p 14: https://www.ofcom.org.uk/__data/assets/pdf_file/0032/198770/ofcom-annual-report-and-accounts-2019-20.pdf.

⁵ Section 3(1) of the Communications Act 2003.

⁶ Section 3(2) of the Communications Act 2003.

⁷ At the time that the Communications Bill was being discussed in Parliament, the proposal for a “citizen” duty was explained on the basis that Ofcom would have responsibility for functions for which a market- and consumer-based duty may not adequately capture the intended scope of Ofcom’s activities (e.g. public service broadcasting and universal service obligations, where it may be difficult to conceptualise the regulated activity as forming a “market”, or to conceptualise a listener with no economic relationship to the broadcaster as a “consumer”). It does not appear that the intention was for the word “citizen” to be interpreted narrowly: the Secretary of State said at the time that “*the citizen interest runs deep through the Bill in the civic sense of the*

- 2.4 In achieving these outcomes, Ofcom must have regard to a wide range of factors including the desirability of promoting competition in relevant markets, the vulnerability of children and others whose circumstances appear to Ofcom to put them in need of special protection, and the opinions of consumers in relevant markets and members of the public generally.⁸ When discharging functions that derive from EU obligations Ofcom is also required to take into account a further six principles (which give effect, amongst other things, to Article 8 of the Framework Directive⁹) which cover: (i) promotion of competition; (ii) the development of the European internal market; (iii) the interests of EU citizens; (iv) neutrality between different forms of networks and services; (v) encouraging interoperability of services and network access; and (vi) encouraging compliance with European standards for service interoperability and freedom of choice for consumers.

Statutory regime

- 2.5 The telecoms industry in the UK is principally governed by the Communications Act, which establishes the core framework for the telecoms regulatory regime, and is applicable to all forms of electronic communications technology, whether used for broadcast or telecoms.¹⁰ It therefore applies to all elements of the telecoms network, including mobile network operators, fixed-line service providers and internet service providers. The regulatory framework for the telecoms industry reflects and implements, in large part, the common EU rules for telecoms, with the Communications Act incorporating the EU Telecoms Regulatory Framework, and being amended to reflect revisions to the EU framework.¹¹

*word, applying to such matters as high standards in television and radio, public service broadcasting, universal service for telecoms and the optimal allocation of spectrum.” See the relevant Hansard records, e.g.: <https://hansard.parliament.uk/commons/2003-07-14/debates/814aeeb0-3e77-4ac0-a361-913a0728a550/GeneralDutiesOfOfcom>. (This background will undoubtedly inform Ofcom’s regulatory approach to this duty, but also could also affect the content of the duty to the extent that the text of the legislation is considered to be ambiguous by a court, per *Pepper v Hart* [1992] UKHL 3). Ofcom has also reflected on its citizen duty, finding that it has special relevance to public service broadcasting and access to broadband, but also acknowledges broad citizen interests in contexts as diverse as promoting innovation, encouraging localism, ensuring the availability of easily usable consumer apparatus, and preventing crime and disorder: see https://www.ofcom.org.uk/_data/assets/pdf_file/0015/51801/citizen_statement.pdf, which is echoed in Ofcom’s more recent publications, e.g. its Annual Plans.*

- ⁸ Section 3(4) of the Communications Act 2003.
- ⁹ The Framework was amended in 2009, and will be repealed and replaced by the European Electronic Communications Code (Directive (EU) 2018/1972) (“EECC”) on 21 December 2020, the date by which the EECC must be implemented by all Member States. Because this date falls within the UK’s transition period, the UK is required to implement the EECC. The equivalent provision in the EECC is Article 3.
- ¹⁰ A discussion on the broadcast regime is outside of the scope of this note. Dedicated broadcast infrastructure is small scale relative to telecoms infrastructure (and becoming a smaller part of the overall infrastructure as traditional broadcast-based media is replaced with Internet-based media that is transmitted via telecoms infrastructure).
- ¹¹ The Communications Act 2003 is based on, and implements, the following four EU directives:
- (i) Directive 2002/19/EC - a directive which deals with access to, and interconnection of, electronic communications networks and associated facilities;
 - (ii) Directive 2002/20/EC - a directive which deals with the authorisation of electronic communications networks and services;
 - (iii) Directive 2002/21/EC - a common regulatory framework for electronic communications networks and services; and

- 2.6 Other significant legislation includes the Digital Economy Act 2017 and the Wireless Telegraphy Act 2006. The Digital Economy Act 2017 introduced new universal service obligations in respect of broadband internet services and requires Ofcom to have regard to the government's statements of strategic priorities relating to telecoms and radio spectrum management.¹² The Wireless Telegraphy Act 2006 requires all mobile operators using radio spectrum, including mobile network operators, to receive individual spectrum licenses from Ofcom.¹³ The licensing regime under the Wireless Telegraphy Act 2006 enables Ofcom to impose conditions, including the terms of use and payment of fees, on mobile network operators.¹⁴
- 2.7 With the UK's withdrawal from the EU and the end of the Brexit transition period on 31 December 2020, the EU Telecoms Framework will no longer be applicable and the UK will, as a matter of law, have the discretion to revise or completely change this regulatory regime. Given that the current regime is implemented in the UK through primary legislation, and will have been recently updated prior to the end of the transition period with the implementation of the European Electronic Communications Code,¹⁵ there are not expected to be any immediate major changes to the regime following the end of the Transition Period, although there will be some amendments to the current legislation to remove provisions that will no longer be relevant such as obligations on Ofcom to notify certain proposed measures to the European Commission.¹⁶

General Conditions of Entitlement

- 2.8 Under the Communications Act, electronic communication services ("ECSs")¹⁷ and electronic communication networks ("ECNs")¹⁸ are covered by a general authorisation regime that does not require providers to acquire an operating license. ECS and ECN providers must comply with General Conditions of Entitlement ("GCs") in order to

(iv) Directive 2002/22/EC - a directive which deals with universal service and users' rights relating to electronic communications networks and services.

¹² Section 98, creating a new section 2B of the Communications Act 2003.

¹³ Section 8 of the Wireless Telegraphy Act 2006.

¹⁴ See https://www.ofcom.org.uk/data/assets/pdf_file/0032/89744/General-Licence-Conditions.pdf.

¹⁵ Directive (EU) 2018/1972.

¹⁶ The UK has proposed to transpose the EEC Directive by way of the Draft Electronic Communications and Wireless Telegraphy (Amendment) (European Electronic Communications Code and EU Exit) Regulations 2020, which were published in October, and are expected to come into force on 21 December 2020. These provide for the EEC Directive to be implemented in full, subject to amendments after the end of the Brexit implementation period to remove provisions that have a cross-border effect and to remove or amend provisions that explicitly refer to European institutions etc.

¹⁷ Defined in Section 32(2) of the Communications Act 2003 as: "a service consisting in, or having as its principal feature, the conveyance by means of an electronic communications network of signals, except in so far as it is a content service."

¹⁸ An ECN is defined in Section 32(1) of the Communications Act 2003 as:

"(a) a transmission system for the conveyance, by the use of electrical, magnetic or electro-magnetic energy, of signals of any description; and

(b) such of the following as are used, by the person providing the system and in association with it, for the conveyance of the signals – (i) apparatus comprised in the system; (ii) apparatus used for the switching or routing of the signals; (iii) software and stored data; and (iv) (except for the purposes of sections 125 to 127) other resources, including network elements which are not active."

operate in the UK.¹⁹ In certain cases (see paragraph 2.10 below), providers will be required to comply with special conditions. Ofcom will notify ECN and ECS providers when these specific conditions are imposed.

- 2.9 Ofcom has powers to set and modify GCs and specific conditions only where the condition or modification is: (i) objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates (this exists only in respect of specific conditions); (ii) not unduly discriminatory against particular persons or against a particular description of persons; (iii) proportionate; and (iv) transparent, in relation to what it is intended to achieve.²⁰ Modifications must be carried out subject to a statutory procedure, which in some circumstances requires public consultation and (until the end of the implementation period) consultation with EU bodies. Decisions by Ofcom in this respect are subject to a full “on the merits” appeal.²¹

Specific Conditions

- 2.10 Ofcom can set four types of specific conditions:

- (i) Conditions related to significant market power (“SMP”): If Ofcom concludes that a company has SMP in a certain market, it may impose SMP conditions, including: (i) network access conditions (see paragraph 2.10(ii) below);²² (ii) universal service conditions (see paragraph 2.10(iii) below); (iii) functional separation of a dominant provider (see paragraph 2.10(iv) below); and (iv) conditions about apparatus supply.²³

Ofcom has a duty to conduct periodic market reviews to assess the level of effective competition in telecoms markets. An operator will be determined to have SMP if it “*enjoys a position [in the market] which amounts to or is equivalent to dominance in the market.*”²⁴ Dominance for the purposes of this provision will be construed in accordance with the EU’s Directive 2002/21/EC.²⁵

¹⁹ According to Section 45 of the Communications Act 2003, conditions set by Ofcom must either be a general condition or a condition with one of the following descriptions: (i) a universal service condition; (ii) an access-related condition; (iii) a privileged supplier condition; and (iv) a significant market power condition. Section 51 provides that general conditions may only relate to (i) protecting the interests of end-users, (ii) securing interoperability and network access, (iii) securing proper and effective functioning of the telecoms network, (iv) giving effect to USOs, (v) provisions for disasters, (vi) protecting public health and (vii) complying with international standards.

²⁰ Section 47 of the Communications Act 2003.

²¹ Section 192 of the Communications Act 2003; for an example of such an appeal, see *Vodafone Ltd v Ofcom* [2008] CAT 22.

²² See also Sections 87 to 89 of the Communications Act 2003.

²³ Ofcom can impose conditions on dominant suppliers of electronic communications that require dominant companies to maintain a separation (for accounting purposes) between matters relating to the supply of electronic communications apparatus and other matters described in the conditions - including the accounting methods that should be used in maintaining this separation. See section 93 of the Communications Act 2003.

²⁴ Section 78(1) of the Communications Act 2003.

²⁵ Article 14(2) of the directive states that: “[a]n undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.” After the expiry of the Brexit transition period, the

Ofcom has made a number of SMP findings in relation to BT²⁶ and (in relation to the Hull area) KCOM, each of which is as a result subject to specific licence conditions. SMP findings also apply to each of the four mobile network operators for voice call termination, imposing obligations in relation to network access and call termination charges.

- (ii) Network Access Conditions: Ofcom can require a provider with SMP to give access to, or use of, its network infrastructure, or impose controls on access pricing, for the reasons set out in the Communications Act.²⁷ Ofcom can impose “active” network access remedies - which involve network access to electronic transmission equipment, such as Openreach’s fixed-line network - and “passive” remedies, which involve access to ancillary network infrastructure, such as ducts and fibre, which can be used by alternative providers to construct their own networks.²⁸ This section also makes provision for Ofcom to impose price controls as appropriate.²⁹
- (iii) Universal service conditions: Ofcom may set universal service conditions considered appropriate for securing compliance with the obligations in a Universal Services Order (“USO”) made by the Secretary of State specifying services to be provided throughout the UK. There are two principal telecoms USOs in the UK: one for fixed line and one for broadband.³⁰ The fixed line USO includes a number of requirements, including that there is at least one universal service provider (“USP”) to meet all reasonable requests for fixed-line connection to the public electronic communications network and access to publicly available telephone services over that network.³¹ The broadband

reference to the relevant EU directive will be removed and replaced by a reference to section 18(1) of the Competition Act 1998 (see Electronic Communications and Wireless Telegraphy (Amendment etc.) (EU Exit) Regulations 2019/246). The definition of an SMP will remain unaffected.

- 26 BT is the owner of Openreach, which runs the UK fixed telecoms network except in Hull. It is operationally and strategically separate from BT. Openreach has been found to have SMP in access markets, and other parts of BT are subject to other SMP findings (e.g. EE, which is owned by BT Consumer, has SMP in wholesale mobile call termination). In this document, we refer to Openreach only where a point is specifically relevant to Openreach.
- 27 Communications Act, sections 87(4) and 88(1). These provisions are directed towards promoting a number of goals, including competition, universal availability, efficiency, sustainability and benefits to end-users.
- 28 See: https://www.ofcom.org.uk/_data/assets/pdf_file/0025/154591/volume-2-bcmr-final-statement.pdf.
- 29 Communications Act, Section 87(9)-(10).
- 30 The fixed line USO in the UK (made under Section 65 of the Communications Act 2003) is derived from the EU’s Universal Service Directive (2002/22/EC) as amended by the Citizens’ Rights Directive (Directive 2009/136/EC). The directive requires that certain services (such as data access) are provided to all end-users in the Member States’ territory at an affordable price. Under the EECC (discussed in footnote 11 above), basic broadband is considered a universal service. The broadband USO is set out in the Electronic Communications (Universal Service) (Broadband) Order 2018.
- 31 In Oftel’s notification to BT and KCOM in 2003, the regulator stated in paragraph 1.1 that: “*Universal service is a concept fundamental to the regulation of telecoms in the UK. It means that basic telephone services should be available to everybody upon reasonable request and at an affordable price. These services are considered essential for everyone in current social and economic conditions, and risk not being provided under competition alone. Regulatory obligations have therefore been created to ensure their provision.*” See “A statement and Notification issued by the Director General of Telecommunications on the implementation of the Universal Service Directive” (22 July 2003) (“**Notification to BT and KCOM**”) available here: https://webarchive.nationalarchives.gov.uk/20080712143755/http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/uso0703.pdf.

USO provides in the same way for a USP to meet all reasonable requests for access to a 10Mbps broadband connection.

Ofcom designated BT and KCOM (in Hull only) as USPs in 2003 respect of fixed telephone lines, and in respect of broadband in March 2020. BT and KCOM are therefore subject to obligations to provide universal services in respect of core telecoms services, including the provision of a telephone line on request and access to a broadband connection with minimum download speeds of 10Mbps.³²

- (iv) Privileged supplier conditions: Privileged suppliers (i.e. those who benefit from special or exclusive rights in relation to non-communications related industries) may be subject to certain conditions including obligations to keep separate accounts in relation to their ECS/ECN and other matters, and requiring that providers submit the accounts of the different parts of their undertakings, and any financial report relating to a part of that undertakings, to a qualified auditor for auditing.³³

3. KEY AREAS OF FOCUS FOR TELECOMS

- 3.1 As a high level observation, there appears from our review to have been less of a focus on environmental sustainability issues in the telecoms sector to date than we have seen in the energy and water sectors. This may reflect the fact that carbon emissions are not a prominent feature of the telecoms industry (as is the case for the energy industry), nor is the telecoms industry obviously linked to the natural environment (as is the water industry). In addition, the Communications Act does not explicitly provide a framework for regulatory obligations relating to environmental protection, in contrast to the specific provisions relating to consumer protection, SMP and universal service discussed above in section 2. As an illustration, in its Plan of Work 2020/21, Ofcom does not specifically refer to any environmental projects or objectives.³⁴
- 3.2 Instead, the focus of Ofcom and the wider telecoms industry appears to have been on protecting customers' economic interests,³⁵ ensuring resilient networks that can withstand natural hazards, accidents and cyber-attacks, promoting roll-out of faster connectivity, and supporting broadcasting.³⁶ In its Plan of Work 2020/21, Ofcom emphasises its support for increased investment in fibre networks and the roll-out of

³² Section 65 and 67 of the Communications Act 2003 section 1 of the Digital Economy Act 2017; the Electronic Communications (Universal Service) Order 2003; and the Electronic Communications (Broadband) (Universal Service) Order 2018. See also the Notification to BT and KCOM.

³³ According to Section 77(2) of the Communications Act 2003, a privileged supplier is a public communications provider who: (i) enjoys special or exclusive rights in relation to the provision of any non-communications services; and (ii) is not such a provider in respect only of associated facilities.

³⁴ See for example "Ofcom's proposed Plan of Work 2020/21" available at: https://www.ofcom.org.uk/_data/assets/pdf_file/0029/194753/statement-ofcom-plan-of-work-2020-21.pdf.

³⁵ In general, Ofcom does not regard the interests of consumers and citizens to be antagonistic: see e.g. Sharon White's speech on this subject: <https://www.ofcom.org.uk/about-ofcom/latest/media/speeches/2015/the-consumer-and-citizen-at-the-heart>.

³⁶ See for example Ofcom's proposed Plan of Work 2020/21.

5G, its “Fairness for Customers” consumer protection agenda, and strengthening the security of the telecoms network and its supply chain, reflecting the Government’s 2019 Statement of Strategic Priorities.

- 3.3 We consider below, at a high level, the extent to which the regulatory framework allows for sustainability in each of the areas identified in the definitional note.

Long-term intergenerational issues

- 3.4 The telecoms industry is a major conduit for the information revolution. This in turn means that the sector is characterised by:

- (i) Extremely rapid innovation in the infrastructure itself: the first UK mass-market take-up of mobile networks only came about 35 years ago, and mobile telecommunications have progressed very significantly in terms of technology developments, service capability and take-up since then; similarly, broadband began in the UK only 20 years ago, and has also progressed through technology upgrade and replacement, increased demand and better service quality and reliability. These changes are much more radical than those in water or energy over the same period. However, this broad trend masks significant variation between different elements of telecoms infrastructure. While the economic asset life of poles and ducts is estimated at 40 years,³⁷ the rapid advances in mobile telecoms technology (of which the ongoing transition to 5G is the latest development) have required mobile network operators to invest in new network infrastructure over a five- to ten-year time horizon.
- (ii) Rapidly increasing demand for more and faster telecoms, with each leap forward in telecoms speed being matched by the creation of new demand for telecoms, e.g. data-heavy applications such as streaming and video calls, as well as ever-greater expectations of reliability and mobile functionality. The COVID-19 pandemic has significantly accelerated this trend.

- 3.5 This means that infrastructure rollout and development arguably does not raise the same types of direct intergenerational issues as in other sectors. While some infrastructural assets have a very long lifespan, infrastructure being built today will by and large be used by the consumers of today and the near future, and will likely be superseded by further innovation in the medium term, while costs can (at least to some degree) be allocated differentially to customers benefitting from different technology standards.

- 3.6 However, long-term intergenerational issues can still arise in this sector. For instance, the Committee on Climate Change has noted that increased flooding due to climate change will damage key infrastructure such as cables, masts and pylons. Ofcom and industry guidance currently asks providers to ensure the critical services are maintained during flooding incidents, but it does not require long-term strategic planning for climate change.³⁸

³⁷ See: https://www.ofcom.org.uk/data/assets/pdf_file/0014/125420/PIMR-consultation.pdf

³⁸ See “*Progress in preparing for climate change: 2019 Report to Parliament*” (July 2019), pp 207 and 208 (available at: <https://www.theccc.org.uk/wp-content/uploads/2019/07/CCC-2019-Progress-in-preparing-for-climate-change.pdf>).

- 3.7 To the extent that intergenerational issues do arise, the legal and regulatory regime could have a role to play in resolving these but it is likely to be more limited than we have seen in other sectors. Ofcom takes an interest in long-term infrastructural issues, encouraging and reporting on new developments,³⁹ and requiring public telephone and electronic communications networks to ensure resilience in emergencies and power outages.⁴⁰ It also has regulatory powers through the price control regime, in relation to activities where the infrastructure owners have been identified as having SMP. However, this applies to a smaller part of the telecoms industry than in other regulated sectors (as SMP designations do not cover the large part of the industry in which effective competition prevails).⁴¹ The power to impose price controls is also subject to the restrictions set out in the relevant part of the Communications Act.⁴² It follows that whereas the price control is one of Ofwat's and Ofgem's most important tools, it may not be able to play quite the same role in the telecoms industry in terms of influencing the approach to sustainability that is taken across the sector.⁴³

People-centred services and localism

- 3.8 There are a range of issues that have arisen in the telecoms sector that could be grouped under this heading including:
- (i) Access to key services: as set out above, full (or close to full) nationwide rollout of mobile and extensive full fibre broadband services is an ongoing objective.
 - (ii) Digital inclusion: beyond infrastructure rollout, there are a range of barriers to accessing services. In 2018, 5.3 million adults in the UK did not have regular access to the internet, with digital exclusion particularly concentrated among the disabled, the elderly and low-income groups; tackling this increasingly important source of inequality is likely to become a growing policy priority for the telecoms sector.

³⁹ See e.g. its Connected Nations Report 2019: https://www.ofcom.org.uk/_data/assets/pdf_file/0023/186413/Connected-Nations-2019-UK-final.pdf and recent update: https://www.ofcom.org.uk/_data/assets/pdf_file/0017/202571/connected-nations-summer-update-2020.pdf.

⁴⁰ GCs A3 and A4.

⁴¹ Specific price controls do regulate certain activities of BT and KCOM (formerly known as Kingston Communications, in Hull). For example, SMP conditions were imposed on BT following Ofcom's Fixed Access Market Review 2014 and the Wholesale Local Access Market Review 2018, including the obligation that BT provide network access on FRAND terms (Ofcom launched an investigation into BT's compliance with certain of these conditions in 2019).

⁴² See paragraph 2.10(ii) and footnote 27 above. These provisions do not refer specifically to sustainability goals, but sustainability is relevant to aspects of the regime, particularly in relation to long-term intergenerational issues, since any price control will require assumptions to be made about the profile of investment in asset renewal and upgrade. Further, section 88(1) requires SMP conditions to promote efficiency, sustainable competition and conferring the greatest possible benefits on the end-users of public electronic communications services, which may also allow for measures to achieve sustainability goals.

⁴³ Historically, retail price controls formed a key component of the telecoms regulatory regime following the privatisation of BT in 1984. In 2006, Ofcom removed retail price controls on BT line rental and calls, citing increased competition in retail markets, driven by market entry by alternative fixed line suppliers and technological developments, including the increased adoption of mobile and Voice over IP services. See: https://www.ofcom.org.uk/_data/assets/pdf_file/0012/42114/rpcstatement.pdf.

- (iii) Popular perceptions of health effects associated with telecoms infrastructure development and rollout (e.g. concerns about electromagnetic fields).⁴⁴
 - (iv) Fostering and creating a favourable environment for community broadband initiatives.⁴⁵
- 3.9 We have not identified any specific barriers that are raised by the regulatory regime in relation to the pursuit of these issues, although it might perhaps also be said that the legal and regulatory framework has relatively little in the way of specific guidance on how to tackle these issues. Nonetheless, there is evidence that Ofcom has been active in these areas, e.g.:
- (i) Requiring public electronic communications services to ensure that customers in vulnerable situations are protected with appropriate policies and measures.⁴⁶
 - (ii) Carrying on its Fairness for Customers initiative, which (among other things) seeks to improve the information available to consumers and eliminate the barriers to switching service providers.⁴⁷
 - (iii) Tackling misinformation in the context of the public controversy over the health consequences of the roll-out of 5G.⁴⁸
- 3.10 Some of these issues are intertwined with broader issues of deprivation, and therefore may be more naturally pursued as an objective by Government than to be targeted by the regulatory regime.
- 3.11 There is also limited scope for the regulatory regime to address the need for additional funding to support the provision of services or infrastructure that cannot be provided on a market basis or by the USO,⁴⁹ with this also forming part of the role of Government (as discussed above in relation to the Shared Rural Network). The 2018 Future Telecoms Infrastructure Review estimated that market mechanisms would be unlikely to deliver full-fibre connectivity for approximately 20% of the population without a degree of public intervention. In addition to measures to increase access to

⁴⁴ See e.g. https://www.ofcom.org.uk/_data/assets/pdf_file/0014/204053/emf-statement.pdf.

⁴⁵ For examples of community projects in existence, see the Broadband for the Rural North initiative (<https://b4rn.org.uk/>) and the Independent Networks Cooperative Association (<https://www.inca.coop/sites/default/files/INCA-Beyond-Broadband.pdf>).

⁴⁶ GCs C4 and C5.

⁴⁷ See: <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2019/broadband-and-phone-firms-put-fairness-first>.

⁴⁸ See: <https://www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/mobile-wireless-broadband/exposure-electro-magnetic-fields>.

⁴⁹ Section 71 of the Communications Act empowers Ofcom to set up a compensation regime for USPs if necessary. Ofcom's statement and decision setting up such a regime in respect of the broadband USO can be found at: https://www.ofcom.org.uk/_data/assets/pdf_file/0033/195774/statement-uso-funding.pdf.

passive infrastructure to reduce roll-out costs, the Government has announced £5 billion in public funding for the Rural Gigabit Connectivity programme.⁵⁰

Environment and emissions

- 3.12 The role of the telecoms sector in relation to the environmental aspects of sustainability is not entirely straightforward:
- (i) On the one hand, electricity is needed to power the telecoms network itself, as well as the data centre equipment and apparatus. Network companies therefore require a huge amount of electricity in order to operate. BT, for example, is one of the largest private sector purchasers of electricity.⁵¹ There is a positive correlation between information transmitted and energy consumed, and so (even with innovation improving energy efficiency per byte) the general tendency towards more telecoms traffic will tend to drive telecoms-related energy consumption.⁵²
 - (ii) Conversely, telecoms networks can facilitate significant emissions savings, e.g. where a person is able to carry out a meeting online rather than travelling to meet in person, or where a telecoms-based smart energy network allows for better efficiencies in repairing faults and predicting demand. As set out at 1.3 above, a detailed review of these issues is beyond the scope of this note.
- 3.13 In regulatory terms, Ofcom has not up to now used its position to advocate for or promote emissions reductions in the industry.⁵³ This represents a significant difference in emphasis compared to other regulated sectors that we have reviewed. Although it is arguably consistent with the absence of any explicit reference to these issues in its current legislative framework, the broad framing of Ofcom’s duties in terms of “citizens’ interests”⁵⁴ appears to us to provide a sufficient basis for Ofcom to play a role in the pursuit of these objectives provided that it can be said to be “in relation to communications matters”.⁵⁵
- 3.14 The legal and regulatory regime is, of course, not the only driver of behaviour. Although a detailed review is beyond the scope of this note, we note that some telecoms companies have made environmental sustainability commitments on their own initiative - e.g., O2 has committed to becoming the UK’s first net zero mobile network by 2025, primarily by transitioning to green energy (which already constitutes 100% of energy bills for which it is directly responsible), while Vodafone

⁵⁰ See: <https://www.gov.uk/guidance/building-digital-uk>. The Future Telecoms Infrastructure Review indicated that Government would be willing to amend Ofcom’s statutory duties if they became an obstacle to achieving Government’s strategic priorities for the sector.

⁵¹ BT Annual Report 2020, page 3 (available at: <https://www.bt.com/bt-plc/assets/documents/investors/financial-reporting-and-news/annual-reports/2020/2020-bt-annual-report.pdf>).

⁵² See: <https://www.ericsson.com/en/blog/2020/3/5g-network-energy-efficiency>.

⁵³ We understand that Ofcom has commissioned a report on this subject, which is mentioned on its website but not reproduced in full: <https://www.ofcom.org.uk/research-and-data/technology/general/sector-studies/environment>. We do not have evidence that this report has led to significant changes in Ofcom policy.

⁵⁴ See discussion in footnote 7 above.

⁵⁵ Section 3(1) of the Communications Act 2003.

has committed to a 40% reduction in greenhouse gas emissions by the same year. BT sources 100% of its UK energy from renewable sources, and has committed to net zero by 2045.

Short-term flexibility

- 3.15 The telecoms industry’s general authorisation regime (described above at paragraph 2.8 above) means that the legal and regulatory regime is less likely to be a barrier to short term flexibility than we have seen in other sectors. It is intended to provide the basis for a flexible regulatory framework that gives providers a significant degree of flexibility to change their operations to respond to changes in needs or technological innovations in the short-term. The nature of the obligations imposed under the general authorisation regime means that it is unlikely to pose a constraint on the achievement of sustainability goals.
- 3.16 However, there are aspects of the regime that could constrain short-term flexibility: for instance, the broad range of regulatory requirements that can be imposed on operators that are found to have SMP (and particularly BT/KCOM) arguably means that they are in a position that is more akin to that of the regulated network companies in water and energy and may find it harder to adjust their activities without spending time addressing the regulatory implications.

Investment in innovation

- 3.17 Rapid innovation in and adoption of digital technology is driving the need for massive increases in telecoms network capacity and capabilities, typified by the roll-out of 5G and full-fibre broadband. The fact that the telecoms industry is the principal vehicle of the information revolution means that the industry benefits from significant R&D investment in innovation, including from tech companies with an interest in ensuring that infrastructural innovation provides enough capacity to meet ever-growing consumer demand.⁵⁶
- 3.18 Fostering innovation in this sense does not appear to be a significant concern for the telecoms industry in the same way as in the energy and water industries.

Collaboration

- 3.19 A significant fraction of UK homes today do not have access to high-speed Internet (5% do not have access to “superfast” broadband of ≥ 30 Mbit/s, while 88% do not have access to full-fibre services),⁵⁷ which is becoming increasingly important to carry on business, shopping and social interactions. In this context, current Government policy

⁵⁶ In 2018, the UK telecoms sector accounted for £947m in R&D expenditure, and was the single fastest-growing contributor to UK business R&D expenditure:
<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/researchanddevelopmentexpenditure/bulletins/ukgrossdomesticexpenditureonresearchanddevelopment/2018>.

⁵⁷ See Ofcom’s UK Home Broadband Performance technical report, 13 May 2020:
https://www.ofcom.org.uk/_data/assets/pdf_file/0038/194897/uk-home-broadband-performance.pdf.

emphasises the importance of increased geographic access to high quality mobile and broadband services.⁵⁸

- 3.20 Collaboration has become increasingly important in the telecoms sector as a way of securing the rollout of key infrastructure (in particular broadband and mobile telecommunications) on a nationwide basis.
- 3.21 An important example of this is the Shared Rural Network project to expand 4G coverage in the UK. Four mobile telecoms companies (O2, Vodafone, EE and Three) own the greater part of the UK mobile network infrastructure. Although it is logistically feasible for each of these networks to build its own independent infrastructure covering the majority of the country, it is increasingly accepted that in some areas there are economic barriers to network development. In March 2020 the four mobile network operators entered into an agreement to establish the Shared Rural Network. This has involved the four companies forming a joint venture to develop a network of new and existing phone masts. The Government has provided funding to support coverage in areas that are not commercially viable. The effect of the network will be to extend rural 4G coverage, guaranteeing coverage for 280,000 premises and an additional 16,000km of road; this will result in 88% geographic coverage within four years.⁵⁹
- 3.22 By enabling network sharing between the mobile network operators, the Shared Rural Network represents a significant infrastructure development. It has also required regulatory support in the form of legally binding coverage commitments that will be enforced by Ofcom to ensure that the targets for network rollout are met.
- 3.23 Collaboration between competitors in the telecoms sector will be subject to competition law obligations in the same way as other sectors of the economy. As we have discussed in the context of water and energy, competition law does not prevent competitors from engaging in collaborative activity - and the Shared Rural Network is arguably an illustration of this. However, the fact that there are significant sanctions that attach to breaches of competition law is likely to weigh in the balance for companies that are considering significant collaborative projects. Ofcom as regulator appears to have taken an active role in the Shared Rural Network arrangements and although its role in the arrangements is, as a formal matter, focused on enforcement of commitments, its participation in the process may also have been helpful in giving assurance that there was no fundamental objection to the arrangements on competition grounds.

4. CONCLUSIONS

- 4.1 UK telecoms regulation has not made sustainability a core focus up to now - instead, it has focussed on consumer outcomes, including ensuring that businesses treat their customers fairly, protecting consumers from scams and promoting competition between telecoms companies. This is consistent with the fact that the telecoms

⁵⁸ See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/842918/SSP_-_as_designated_by_S_of_S_.pdf.

⁵⁹ See: <https://www.gov.uk/government/news/shared-rural-network> and <https://srn.org.uk/about/>.

industry stands at one remove from the central sustainability-related debates in the UK, especially emissions and the natural environment.

- 4.2 In this context, the telecoms regulatory regime is also noticeably less sustainability-focused than in energy and water, and does not impose specific sustainability-related obligations on the regulator or companies.
- 4.3 However, it is not apparent from our review that the pursuit of sustainability initiatives in the telecoms sector is hampered by the operation of the legal and regulatory regime. In particular, Ofcom's broad duty to further the interests of citizens (notably not just "consumers", as in other industries), which was alternatively formulated during the parliamentary debate around the Communications Act as the "interests of the whole of the community",⁶⁰ could be used as a basis for taking into account a wide range of matters of concern to citizens in the decision-making process, including sustainability issues.
- 4.4 To the extent that the UK wished to change the legal regime to facilitate achievement of sustainability issues to a greater degree - e.g. expanding the powers related to SMP conditions and the price control, which are discussed above at paragraphs 2.10 and 3.7, to allow for explicitly sustainability-related conditions - it will in principle be free to do so after the end of the Brexit implementation period, when the EU telecoms framework will no longer have legal effect in the UK. However, the benefits of such an approach would need to be weighed up against the broader implications of introducing divergence from the European regulation regime, both from a telecoms-specific point of view, and a broader UK policy perspective.
- 4.5 Ofcom has already used its position to take a role in sustainability-related initiatives, e.g. the Shared Rural Network, and it is open to Ofcom to do the same in respect of other similar projects, e.g. telecoms companies achieving carbon neutrality,⁶¹ other projects to eliminate duplication of infrastructure while maintaining effective competition, and even using its licensing powers and SMP conditions to incentivise achievement of sustainability goals.⁶²

⁶⁰ See footnote 7 above.

⁶¹ In this respect see Ofcom's own efforts to reduce its own emissions, set out in its Annual Report: https://www.ofcom.org.uk/_data/assets/pdf_file/0032/198770/ofcom-annual-report-and-accounts-2019-20.pdf.

⁶² In each case, subject to the restrictions imposed by the Communications Act. For instance, the GCs already include provisions relating to infrastructure resilience and customers in vulnerable situations: see paragraphs 3.7 to 3.9 above. However, GCs can only be used for matters of general application, as they are universal and cannot be tailored to individual companies, and also may only be issued pursuant to the specific powers laid out in the Communications Act (reflecting the EU legislation from which the legislative framework is derived).