GLOBAL INFRASTRUCTURE INVESTOR ASSOCIATION

Response to

NATIONAL INFRASTRUCTURE COMMISSION

THE FUTURE OF REGULATION STUDY

CALL FOR EVIDENCE

INTRODUCTION

0.1 Global Infrastructure Investor Association (**GIIA**) welcomes the opportunity to provide a submission in response to the call for evidence in the National Infrastructure Commission's Future of Regulation Study. GIIA is keen to work constructively with the Commission to help the Commission build a robust evidence base that can provide a strong basis for informed policy proposals.

0.2 GIIA currently represents 53 global infrastructure investors (with total combined assets under management of approximately $660 billion across six continents) and key advisors to the sector. GIIA Members make significant investments in these sectors. GIIA Members are responsible for circa 55% of the capital expenditure in the UK regulated water sector. Members also own energy network and fibre companies that plan to invest billions of pounds in future UK infrastructure. It is therefore well placed to provide the Government with the views of the global infrastructure investor community. A list of GIIA Members is provided in **Annex 1**.

0.3 We confirm that nothing in this response is confidential. We also confirm that we would be happy to be contacted by the Commission in relation to our response**.**

Key comments

0.4 Economic regulation of water, energy and telecoms in the UK[1] has facilitated the investment that has delivered world class infrastructure with improved outcomes for consumers, at low cost. It has facilitated productivity improvements over and above those which occurred in the wider UK economy and public sector over the same period, reducing costs and improving services for consumers. The World Economic Forum ranks the UK 11th in the world for its infrastructure[2], ahead of Germany, Spain, Italy, Canada, Australia, New Zealand and the United States.

0.5 Consumer needs have been met at a low cost—an average household pays £1.11 a day for water and sewerage services, less than £3 a day for power, light and heat,[3] and less than £2 a day for broadband and telephone usage.[4] Ofwat estimates annual average water bills are £110 lower than they would have been if companies had remained in the public sector;[5] Ofgem estimated that it saved consumers £7.8bn last year.[6] International comparisons of prices for water utility services in 2015 show that the UK has lower water charges than Belgium, Switzerland, Finland, Australia and the Netherlands and similar costs to France.[7] Whilst there is room for improvement in the coverage of UK fibre networks, the UK is also one of the cheapest countries in Europe for mobile broadband and calls.[8]

0.6 These outcomes for consumers to date have been achieved through stable, predictable and independent regulation. The UK model of economic regulation has successfully enabled the investment in infrastructure that consumers require. Since privatisation, approaching £80bn has been invested into UK energy networks[9] and £150bn has been invested in the water sector in England and Wales.[10]

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1 Unless otherwise specified, given the differences in scope of the different regulatory regimes, references in this response to "the UK" refer to England and Wales in the case of water, to England, Wales and Scotland in the case of energy, and to England, Wales, Scotland, Northern Ireland and the Isle of Man in the case of telecommunications.

2 https://www.weforum.org/reports/the-global-competitveness-report-2018

3 https://www.moneyadviceservice.org.uk/blog/what-is-the-average-cost-of-utility-bills-per-month (£8.21/£5.11)

4 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours (£530/37.2 hours)

5 https://www.ofwat.gov.uk/wp-content/uploads/2016/01/prs_inf_afford.pdf

6 https://www.ofgem.gov.uk/news-blog/our-blog/ofgem-publishes-first-consumer-impact-report

7 http://waterstatistics.iwa-network.org/graph/11 (Countries proxied by Capital/Major cities of those countries)

8 *Mobile Broadband Prices in Europe 2018*, A study prepared for the European Commission DG Communications Networks, Content & Technology by Empirica and TUVRheinland.

9 https://www.ofgem.gov.uk/system/files/docs/2018/02/february-the-energy-network.pdf

10 https://www.water.org.uk/news-item/michael-roberts-response-to-labours-clear-water-report/

0.7 The UK model of economic regulation has been admired and emulated in many other countries.[11] However, this model is now facing challenges in the UK with regulators coming under greater public scrutiny and resulting political pressure. Investors are concerned that this may lead to policy decisions with a focus on short term outcomes that gives less weight to long term resilience, innovation and intergenerational fairness.

0.8 Significant new long term investment is needed across infrastructure sectors, to fund both 5G and fibre, support energy transition and to ensure it provides for long term water resilience. GIIA believes that any significant erosion in investor confidence will impact the low cost of capital from which these sectors currently benefit.

0.9 In order to continue to attract the investment necessary to provide the UK with the infrastructure it requires, it is important to retain the key regulatory policy principles that have helped to facilitate the existing investment in regulated utilities over the past 30 years. At the core of this is:

(a) independent regulators making evidence-based decisions,

(b) at arm's length from short-term political considerations,

(c) ensuring that decisions are then subject to a proportionate but robust merits based appeals regime.

0.10 The regulated sectors can continue to attract investment and deliver positive outcomes for consumers and the environment if objectivity, transparency and predictability continue to be core to the framework. Members believe that the future UK regulatory model needs to provide incentives for effective management of existing infrastructure and to ensure appropriate incentives and rewards exist for innovation and early development of new technologies.

1.	**Where has the economic regulation of water, energy or telecoms systematically failed or succeeded to:** **a. facilitate future investment needs;** **b. promote competition and innovation; and** **c. meet the needs of both current and future consumers;** **and what do you see as the most important improvements that could be made to the UK's system of economic regulation?**

Facilitating future investment needs:

1.1 The post-privatisation regulatory framework has been successful at incentivising investment. GIIA members are concerned that in recent years there has been a shift away from the principles of regulatory stability and predictability. Any resulting underinvestment that occurs today to reduce bills for current consumers will mean less efficient investment has to occur in future, leading ultimately to higher bills for future consumers.

1.2 It is useful to compare the investment that economic regulation has facilitated and what occurred before privatisation. The comparison is stark and prior to privatisation levels of investment were linked to wider government spending priorities rather than what was required to provide the necessary infrastructure.

[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/417618/bis-15-198-consultation-on- cooperation-between-economic-regulators-government-response.pdf

1.3 Taking the example of the water sector, governments in the 1970s and 1980s were reluctant to allow water authorities to borrow enough to meet their capital needs.[12] By 1982 water sector capital expenditure had fallen to half the level of 1974.[13] In the telecommunications sector, ministers prioritised other more politically important programmes, leading to significant under-investment.[14]

1.4 The current regulatory model in these sectors has facilitated this investment, because the principles which underpin regulatory policy making have given investors confidence to deploy capital. Moves away from the current regulatory model and these principles may make the regimes less attractive to investors and result in less investment or investment at a higher cost to consumers.

1.5 In the context of climate change and population growth, both of which are putting pressure on the resilience of the UK's infrastructure, there needs to be a balance between the costs and benefits to current and future consumers over time. The policy and regulatory framework has historically been able to strike this balance in sectors with significant investment needs. For example, in electricity generation, tools such as 'contracts for difference' (CfDs) have enabled a significant proportion of UK power to be generated by low-carbon sources in a very short period of time. Policymakers have taken a long term view, balancing investment and affordability, by allowing current customers' bills to absorb some of the investments in the future network.

Meeting the needs of current and future consumers

1.6 There have been dramatic improvements in environmental performance. Prior to privatisation and economic regulation of the water sector, under-investment in the sector in the 1970s and 1980s resulted in high levels of pollution and consumer dissatisfaction. In 1989 Friends of the Earth called the UK the "Dirty man of Europe"[15] and in part for that reason "Surfers against Sewage" was founded in Cornwall in 1989.

1.7 Following privatisation, economic regulation and the investment that was enabled began to address the situation. England and Wales now have world-leading standards of water quality and companies are providing better outcomes for consumers than are delivered by their counterparts in neighbouring Ireland and Scotland (which operate different regulatory systems). Taking EU bathing water standards as an example, compliance in England has increased from 65% in 1988 to 99.5% in 2014, and in Wales from 77% in 1988 to 100% in 2014.[16] Levels of compliance in both Scotland and Ireland are lower. Water quality in England and Wales is the most stringently tested in the world,[17] and meets standards 99.71% of the time.

1.8 The water sector in England and Wales has outperformed those in France, Ireland, Italy and Spain since 1990 in terms of the most important service indicators. The water sector in England and Wales is also the top performer for customer service and compares well for bill levels.[18]

1.9 International polling of consumers in 28 countries has identified that UK water customers are now among the most satisfied in the world with their water and sewerage services.[19]

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12 https://www.ofwat.gov.uk/wp-content/uploads/2015/11/rpt_com_devwatindust270106.pdf

13 ibid, pg 22

14 https://www.instituteforgovernment.org.uk/sites/default/files/british_telecom_privatisation.pdf

15 Jonathan Porritt (Director, Friends of the Earth), *The United Kingdom: The Dirty Man of Europe?*, RSA Journal, Vol 137, p 488.

16 Ofwat (2015) 'Towards Water 2020 – meeting the challenges for water and wastewater services in England and Wales', pp 17. While the main Welsh water company, Dwr Cymru, is in public ownership, it is regulated under the same comparative regulation regime as privatised water companies.

17 https://www.telegraph.co.uk/news/health/news/9775158/Bottled-water-not-as-safe-as-tap-variety.html

18 https://www.water.org.uk/wp-content/uploads/2018/12/GWI-International-sector-performance-comparisons.pdf

19 UK consumers were the most satisfied in 2017 (IPSOS MORI, *Global Infrastructure Index 2017*). In 2018, following poor weather conditions, which affected impacting performance, the UK ranked 8th.

1.10 Regulation in the energy network sector has also succeeded in delivering improvements for consumers. As described further in response to **Question 4**, performance standards have risen and continue to rise, whilst the networks also adapt to changing technologies and consumer requirements.

1.11 In the telecoms sector, recent EU reports show that the UK has one of the best performing telecoms sectors, with high levels of population coverage and some of the cheapest prices in Europe for 4G and fixed line broadband. However, whilst the UK compares well for affordability and connectivity of broadband and 4G on several measures it currently has low levels of fibre penetration compared to other developed markets. A material amount of private sector investment will be required to increase this. Investment in the provision of fibre broadband from new market entrants such as City Fibre, Enet, Truespeed and Gigaclear is increasing.

Promoting Competition and Innovation

1.12 The stable regulatory framework has also supported the introduction of competitive market conditions for segments of the three sectors that do not have natural monopoly characteristics. The regulatory approach in some sectors, such as telecoms, has enabled the emergence of several innovative competitors in the market. In sectors that operate as regulated monopolies, such as water and energy networks, the use of comparative benchmarking by regulators has proved effective in mirroring competitive conditions, resulting in improvements in efficiency and innovation that have directly benefitted consumers (see answers to **Questions 4, 5** and **6** below).

Concerns about current direction

1.13 Notwithstanding the successes outlined above, investors are concerned that regulatory stability and predictability are not being sufficiently prioritised by Ofwat and Ofgem in the forthcoming price control periods for water (PR19) and energy networks (RIIO-2). For example:

(a) *No longer facilitating future investment needs:* The risk-reward balance under PR19 and RIIO-2 will be materially different from previous regulatory settlements, seemingly on the basis that previous settlements have allowed too great an outperformance by companies of the targets set. We understand the need to ensure that utility companies maintain public trust. However, we are concerned that the balance is moving too far in the other direction, by exposing companies to a greater set of risks at the same time as pushing down allowed rates of return to investors.

The National Infrastructure Commission (**NIC**) has flagged the need for more long-term investment in the water sector to address long-term resilience needs (and address issues faced by changing weather patterns).[20] The reduction in the level of allowed return and increased levels of regulatory risk will make it more challenging for investors to allocate capital to these sectors over the long term.

[20] https://www.nic.org.uk/publications/preparing-for-a-drier-future-englands-water-infrastructure-needs/

(b) *Questionable approach to promoting competition and innovation:* In the new price controls, Ofwat and Ofgem seem to prioritise negative rather than positive incentives; that is, a greater focus on penalising companies if they do not innovate, rather than rewarding those that do. A penalisation approach encourages companies to focus cautiously on minimum standards, and disincentivises riskier initiatives with real transformative potential for positive consumer outcomes. It also risks starving poor performers of the capital they need to turn around their operations; a poor performer faces considerable downside operational risk, but has only capped upside performance available. This removes the incentives for turn-around investment that would exist in a competitive market. While a regulatory framework for network monopolies should try to reflect competitive conditions where feasible, the move to focus on relative (rather than absolute) performance targets also risks deterring or preventing best practice sharing and collaboration, diminishing the overall levels of innovation in the sectors.

(c) *Over-prioritising current consumers at expense of future consumers*: It is imperative that consumers should pay a fair price, but additionally, as the NIC has recognised, the water and energy sectors face significant long-term risks and challenges to future-proof the networks. There is a need to ensure that companies and networks have sufficient flexibility and incentive through the regulatory model to innovate and adapt to future challenges and consumer needs. However, Ofwat and Ofgem are looking to reduce the portion of 'outperformance' gains companies can retain. While this could benefit current consumers in the short-term by lowering bills, it diminishes the appetite for companies to innovate in riskier propositions; meanwhile, instability in the regulatory regime raises the cost of capital and hence the cost of future investments. All of this appears to be detrimental to the interests of future consumers.

2. The National Infrastructure Assessment (https://www.nic.org.uk/publications/ national-infrastructure-assessment-2018/) outlined a number of changes and challenges in infrastructure to 2050 (eg the move to fibre in telecoms, decarbonisation in energy and the need for long term resilience in the water sector). How might the scope, functions or activities of economic regulators need to adapt in light of future challenges?

2.1 Over the next 30 years, the water sector will continue to require significant levels of investment to meet the challenges of population growth (particularly in the South and East of England), the effects of climate change and to deliver better environmental outcomes. This is reflected in the UK Government's 25 Year Plan to improve the environment; previous work by Defra and the NIC suggest recent high levels of investment must be maintained. If this is to happen, it will be essential that the regulatory framework is oriented towards long term resilience and not focussed on short-term outcomes.

2.2 In the energy sector, decarbonisation targets and climate change will drive the need for significant additional capital investment to maintain current levels of service and outputs. As is the case with the water sector, regulators will have to take a much broader and longer term view of investment needs in the future, and balance this with shorter term pressures around affordability for current consumers. As we work towards decarbonising the heat sector (and the wider energy sector) over the coming decades, there is a strong need for a 'whole system' approach looking across gas and electricity, and generation, transmission/distribution and demand, to identify optimal solutions.

2.3 The aim of the regulatory framework should be to create the right environment and set the right incentives for the market to deliver on long-term policy objectives in the most efficient manner possible and with proper regard for current and future bill payers. Taking a cross-sector approach to meet long-term policy objectives around decarbonisation and other challenges will help to reduce costs and provide greater resilience. This would require Ofgem considering the issue holistically across gas and energy networks to enable whole system solutions to be realised.

3. How might the increasing availability of data impact regulation in future? Can data increase the pace at which regulation responds to change, enabling regulation?

3.1 No response provided.

4. How have Energy, Water and telecoms sectors performed with respect to efficiency since privatisation?

Energy and water networks

4.1 Prior to privatisation, the productivity of nationalised industries lagged significantly behind the private sector; the rate of return on capital was only 0%–2%.[21] Studies show that, under economic regulation, the productivity performance of the water and energy sectors has outstripped the wider UK economy and the public sector:[22]

(a) Annual productivity growth for the water and sewerage sector has averaged 2.1% since privatisation,[23] with a total improvement of 64% since privatisation.

(b) A University of Cambridge Energy Group Report for Ofgem[24] analysing energy network productivity between 1990 and 2016 found productivity increases of 34% for electricity distribution and 72% for gas transmission.

(c) In comparison, the most recently available ONS data which covers the period between 1997 and 2013 shows that public sector productivity improved by 1.2%.[25] A DEMOS/PWC report found that public sector productivity in 2010 was almost identical to productivity levels in 1997.[26]

(d) The productivity improvements in energy and water networks compares with the average growth of UK Total Factor Productivity across the wider economy between 1990 and 2016 of 0.62% a year.[27]

4.2 Productivity and efficiency in UK energy networks has improved significantly since privatisation in 1990. For example:

(a) Since privatisation there have been continuous improvements in minimum standards and delivery driven by regulatory incentives that supported appropriate levels of service. According to the Energy Networks Association,[28]

(i) the average gas customer will experience an unplanned interruption once every 140 years;

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21 https://www.instituteforgovernment.org.uk/sites/default/files/british_telecom_privatisation.pdf
22 See response to **Question 4**.
23 https://www.water.org.uk/wp-content/uploads/2018/11/Water-UK-Frontier-Productivity.pdf, pg 5
24 https://www.ofgem.gov.uk/ofgem-publications/146010
25 https://fred.stlouisfed.org/series/TFPGUKA
26 https://www.pwc.com/gx/en/psrc/united-kingdom/assets/pwc-productivity-in-the-public-sector.pdf
27 https://fred.stlouisfed.org/series/TFPGUKA
28 http://www.energynetworks.org/assets/files/ENA%20Response%20to%20Helm%20Report%20Final.pdf

(ii) for electricity customers, since privatisation in 1990, there has been a 50% reduction in number of customer interruptions, and a 60% reduction in length of customer interruptions;

(iii) network costs are now 17% lower than they were when at the time of privatisation and are projected to remain flat, and in some areas fall, into the next decade.

(b) Future productivity improvements in energy networks will also be helped by innovation in the sector. Independent research carried out by Pöyry has shown that innovation projects by local electricity Distribution Network Operators (DNOs) could deliver up to £1.7bn of benefits by 2031.[29]

4.3 A Frontier Economics analysis of productivity growth in England and Wales against comparator sectors showed that the water sector had "outperformed materially those comparators in the decades after privatisation and leading up to the GFC in 2008".[30] Although, following the financial crisis, water sector productivity declined slightly alongside a wider fall in UK productivity, the analysis shows that the sector has continued to outperform productivity changes in the wider UK economy.

4.4 A 2018 study by Global Water Intelligence comparing the UK water sector with France, Ireland, Italy, Spain and Germany states that "There is a strong case for stating that the England & Wales regulated system delivers the best value for money of all the utility sectors in this study. The model has driven up standards and increased efficiency."[31]

Telecommunications

4.5 The telecoms sector has undergone several changes since BT was privatised, making direct productivity comparisons difficult. The ONS itself recently demonstrated this when it stated it had underestimated productivity gains in the telecoms sector.[32]

4.6 Better evidence is available from comparisons of price, coverage and availability of fast modern telecoms networks with other EU and OECD countries. These show that the UK compares well internationally, whilst having some room for improvement on fibre. In a recent EU report the UK was ranked 7th in the EU for population coverage for a minimum 30mbps broadband coverage;[33] no other Member State with a population over 30m was in the top 13. The same report also explained that France is questioning the widespread use of fibre and "is now considering the use of other technologies such as 4G fixed wireless connections in certain areas".

4.7 Whilst the UK currently has low levels of fibre penetration compared to France, new market entrants in the UK are rolling out the installation of thousands of kilometres of new fibre which will enable millions of extra homes and businesses access to fast fixed line broadband.

4.8 Currently some government subsidy funds the roll out of fibre networks that may otherwise be funded privately and on a fully commercial basis. The continued need for subsidy should be assessed on an ongoing basis with a goal of creating the right environment to facilitate private investment to deliver the government's policy ambition.

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29 http://www.energynetworks.org/assets/files/ENA%20Response%20to%20Helm%20Report%20Final.pdf

30 https://www.water.org.uk/wp-content/uploads/2018/11/Water-UK-Frontier-Productivity.pdf

31 https://www.globalwaterintel.com/global-water-intelligence-magazine/20/1/general/english-and-welsh-utilities-offer-best-value-for-money-according-to-new-report

32 https://www.thetimes.co.uk/article/productivity-may-be-better-than-thought-after-ons-gets-wires-crossed-hhm73prkv

33 http://publications.europa.eu/webpub/eca/special-reports/broadband-12-2018/en/

4.9 The UK performs well for cost and coverage in mobile telecoms and "is one of the least expensive countries in Europe" for mobile broadband.[34] It also compares well with other OECD countries. At a range of different consumption levels for mobile data and calls, consumers in the UK pay amongst the least in Europe and in some cases less than half the EU average price.

4.10 The EU's analysis is also confirmed by Ofcom analysis of the EU's five largest countries, published in December 2018. This shows "the UK had the largest share of mobile connections that were 4G services on a 4G-enabled device (50%) and the highest number of per-capita 4G connections, at 69 per 100 people. The UK also led in terms of average data volumes consumed per capita over fixed broadband (53GB per month – more than double that in any of the other EU5 countries), and in mobile data volumes (at 1.7GB per month)".[35]

5. How has competition impacted on investment, innovation and outcomes for consumers across energy, water and telecoms since privatisation?

5.1 For the water and energy network sectors—which are natural monopolies—the economic regulatory framework has generally sought to mimic incentives that would materialise in a naturally competitive market. In our view, it has largely succeeded in this objective, and has therefore been effective in delivering improvements in investment, innovation and outcomes for consumers since privatisation (see response to **Question 4** above).

5.2 However, there is always a risk of regulatory failure. Simulated competition between operators may not deliver optimal outcomes for consumers. This is particularly the case when it comes to innovation, where there is a balance to be struck between incentivising innovation by individual companies and allowing diffusion of new technology and ideas to the industry as a whole. In RIIO-2, Ofgem is focusing on the former at the expense of the latter. It is proposing to remove some dedicated pots of innovation funding, assuming that companies will competitively innovate as part of their ordinary course of business processes. This, combined with relative performance benchmarks, limits the incentive to share best practice across companies and could lead to a lower overall level of innovation across the sector.

6. How has regulation affected the level of innovation in energy, water and telecoms, compared to these utilities in other countries and/or other comparable industries?

6.1 Regulation in the UK has typically focused on output-based regulation, which encourages innovation by allowing companies to use their discretion to reach a set output in the most cost-efficient way. For example:

(a) An output-based approach has encouraged innovation projects such as robotics and automaton technologies and helps avoid gold-plated solutions.

(b) The concept of "totex" allows companies the flexibility to use capex or opex budget as they judge best fits the individual circumstances. In contrast, and by way of example, in some Northern European countries, the output allowances for electricity networks depend in part on undergrounding of cables (that is, based on cable length, at a set unit price). This has incentivised networks to maximise distances, rather than push for the most efficient solution to deliver the same output from a customer perspective.

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34 *Mobile Broadband Prices in Europe 2018*, A study prepared for the European Commission DG Communications Networks, Content & Technology by Empirica and TUVRheinland.

35 https://www.ofcom.org.uk/__data/assets/pdf_file/0034/108898/eu5-eu28-broadband-scorecard-2017.pdf

6.2 The UK regulatory framework has also been effective in allowing sharing of outperformance benefits with customers, in the form of lower bills. We are not aware of this approach being widely adopted in other jurisdictions. However, the UK regulators' increasing focus (across both water and energy) on relative incentives, where a company's efficiency is judged relative to others in the sector, may undermine these positive aspects—see further discussion in response to **Question 1**, at **paragraph 1.13(b)**. This could result in lower overall levels of innovation across the industry.

6.3 Companies respond to the incentives and rules created by regulators. An example of this is the Network Innovation Competition that Ofgem has launched. It has helped energy networks become more innovative and adopt and trial smart grid technology to benefit customers and the environment.

7. When has regulation been too slow to adapt to changing market circumstances and what have been the consequences for consumers and investors?

7.1 It is difficult for regulators to predict with certainty how external developments will shape the industry over the regulatory period (especially where price control periods are relatively long). This is more likely in areas such as information, communications and technology, which are rapidly evolving.

7.2 For example, network companies needed to make significant, unforeseen cyber-security investments in the most recent water and energy regulatory periods to ensure they had appropriate measures in place to protect vital infrastructure from potential threats and ensure resilience. While such IT investments were not necessarily factored into the cost allowances set by regulators at the start of regulatory periods, the implementation of more advanced IT solutions contributed to more efficient processes and digitalisation, supporting efficiency goals set by the regulator.

7.3 Further consideration could be given to how headroom for similar uncertain developments should be provided for within the regulatory framework.

8. Where could regulators work together more consistently to meet future challenges, achieve efficiencies within the regulatory system or to promote better outcomes for consumers, investors or society?

8.1 The establishment of the UK Regulators Network appears to have helped regulators work more closely together on certain issues. However there are greater opportunities for regulators to work more collaboratively, for instance around shared terminology or on cross sector issues.

8.2 Whilst regulators should apply consistent principles and work together where there are cross-sector challenges, the different challenges and technicalities of each sector should continue to be recognised in each regulator's approach. For example, the investment and technological change needed for energy networks to deliver the energy transition, and for water companies to improve long term resilience, are quite different. Both have little in common with the nature of investment needed in fixed and mobile communications infrastructure. This calls for different approaches for each sector.

8.3 In addition to regulators working together, it is also important for each regulator to consider holistic solutions to problems across the sectors they regulate. For example, the decarbonisation pathway for heating is likely to be delivered through some combination of the gas and electricity networks. Setting a regulatory framework for each sub-sector in isolation that does not allow for example for cross-sector innovation grants, may prevent more efficient 'whole system' solutions from being developed.

9. What changes to the existing regulatory framework would be necessary to promote greater collaboration and regulatory consistency? Are there functions that might better be provided on a multi-utility basis without the need for wider organisational change?

9.1 No response provided.

10. What is the case for or against a multi-utility regulator covering energy, digital and water?

10.1 We make no comments on the merits for or against a multi-utility regulator but seek to emphasise in our submission the importance of a stable, predictable and independent regulatory regime to deliver optimal outcomes for consumers. If the UK is to continue to attract the domestic and international investment necessary to finance infrastructure, it should preserve its reputation for world-leading economic regulation.

10.2 Any changes to the existing economic regulation framework should attempt to preserve the aspects which have made it work well for both consumers and investors over many years. These include:

(a) Independence from government, with a focus on intergenerational fairness

(b) Transparent, objective and stable regulatory policy made using consultations to inform decision making

(c) Sector specific regulatory and technical sector expertise

(d) The ability to make merits based appeals to an independent expert regulatory appeal body, which makes transparent, predictable and objective decisions through a well-defined and time-limited process.

10.3 Investors regard the UK's RCV/RAB model as a key part of the UK's regulatory regime. It provides investors with confidence that they will be able to earn a fair return and fully depreciate their investment over multiple political and regulatory cycles. Retroactive changes being applied to existing investments made under this model would raise considerable concern amongst investors and increase investor perception of risk. Over time this would adversely impact the cost of capital afforded to the sector.

11. Is the traditional role of economic regulation, to mimic the outcome of a competitive market, sufficient to ensure future investment and to meet the needs of current and future consumers, and if not, how might this role need to change?

11.1 The traditional role of economic regulators is to put in place the right incentives for the market to deliver desired outcomes, with detailed choices over the precise mechanism of delivery left to companies that have the specific skills and expertise to respond to these incentives and deliver outputs.

11.2 Regulators in different markets have sought to deregulate and introduce competition when they considered that a competitive market might exist, notably with the CAA and several airports. However Ofwat's attempts to introduce non-household water retail competition have been less successful and it has been suggested that the implementation costs may outstrip the benefits to consumers**.**

11.3 This desire to introduce a competitive market contrasts with other elements of Ofwat's current regulatory approach which move away from replicating competitive markets. In an unregulated competitive market, companies would get rewarded for benefits they create through operational change and taking on additional risk. As described in response to **Question 1**, however, the current regulatory regime caps upside for bottom quartile companies, reducing the incentive to reform those companies.

11.4 Rather than exploring changes that may bring about only a marginal improvement, we propose that the underlying principles which made the regime a success are retained. From the perspective of investors, clarity and stability of the framework are essential. Unpredictable change to the framework, as seen recently in both the energy and water sectors, risks causing long term damage to investment incentives. As the sectors are working towards delivering long term outcomes, it is important for regulators to take a holistic view, balancing the needs of both current and future consumers. Putting off investment that is needed today risks materially higher investment costs in the future—total capital expenditure requirements will be inefficiently higher than they would otherwise need to be.

11.5 Regulators therefore should take a long term view of investment needs. However, as described in response to **Question 1**, we have observed a growing preference for regulatory action that favours affordability for current consumers over investment for the future. Independent economic regulation is most effective if it operates outside of short-term political decision making. Although the relevant legislation defines 'consumers' to include existing and future consumers, current pressures appear to be for regulators to operate to shorter time horizons and give current consumers preference. It would be helpful if regulators could be given an explicit institutional mandate to accommodate a long-term view to ensure efficient investments are made.

12. What should be the boundary between government setting policy and strategic direction and independent regulation in these sectors? Do the existing duties and functions of regulators need to be adjusted to reflect this?

12.1 The privatised utilities have delivered significant investment, innovation and efficiency improvements over the past three decades (see answers to **Questions 1** and **4–7**). This is partly due to the system of independent economic regulation in the UK. The regulators have traditionally been insulated from short-term political developments, with evidence-based decision-making guided by economic and technical analysis.

12.2 However, the consensus underpinning this model appears to have changed in recent years for various reasons (including real or perceived regulatory failure). Political and policy considerations appear to play a much bigger role in the regulatory approach, and in some cases the Government has encouraged regulators to use specific policy tools to deliver certain outcomes.

12.3 For example, Defra encouraged Ofwat to address the perceived problems with the high gearing of water companies in January 2018,[36] after the PR19 methodology had been finalised. Ofwat launched an unprecedented supplementary consultation specifically to implement these measures. From the perspective of investors, such an approach has created additional regulatory and political risk.

12.4 Governments should design the relevant market approach by setting the overall framework within which regulators can operate, leaving regulators discretion over how government's policy objectives are achieved. Any subsequent major rethink or market redesign needs to protect both long-term investors and consumers.

[36] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/678320/water-companies-letter-SoS-to-Ofwat-180131.pdf

Importance of a robust merits based appeals process

12.5 In conjunction with this broad discretion for regulators, we would stress the importance of a robust and effective appeals regime. We support the independence of regulatory decision making but believe this can only work properly if regulators are fully accountable for their decisions. The presence of a robust merits based appeals process undertaken by a competent authority provides accountability for regulators and protection to investors. The removal or weakening of this protection would damage investor perception of the UK regulatory model.

12.6 There is an opportunity to improve the existing appeals process in the water sector by aligning it with the energy sector. At present the process of appealing an Ofwat decision requires the CMA to review the entire price control. By contrast energy appeals, while still based on the merits, are confined to specific grounds for appeal and the CMA will not substitute its view for Ofgem's on genuine matters of discretion. The approach in the water sector creates greater uncertainty for consumers, companies and investors, absorbs more management time and is a more costly process.

12.7 In addition, the requirement for Boards to provide assurance on finance-ability at the business plan submission stage compromises a company/investors' ability to appeal.

12.8 It is also important that regulators are discouraged from making use of 'soft regulatory' tools that are not amenable to appeal or judicial review. For example, Ofwat has brought about a number of changes in water company governance, not just at the level of the licence holder but also the holding company, without any formal licence modifications. Such use of 'soft' pressure on water company investors is not readily amenable to judicial or quasi-judicial oversight. Either preventing 'soft regulation' or providing for additional plausible routes of legal challenge that would apply to soft measures might be considered where appropriate to discourage any misuse.

13. Has there been a lack of clarity over strategic goals? What is the cause of this and what has been the impact on investment?

13.1 In addition to the general points raised above in our answers to **Questions 11** and **12**, two examples are:

(a) *Gas networks:* the continued uncertainty over the decarbonisation pathway for heat has meant investment in innovative technologies or solutions has been held back.

(b) *Water*: Lack of clarity from Ofwat about the purpose of the 2013 Ofwat licence amendment led to it being dropped. Subsequently when the purpose was explained, companies were able to adapt to the regulators evolving approach to regulating the sector and Ofwat put in place protections which provided investors with comfort.

(i) This demonstrates the flexibility of the UK regulatory model and willingness of investors to support change provided proper consultation takes, with a willingness to adapt those changes to preserve investability and to avoid retroactive changes to the treatment of existing investments.

14. Are the government's principles for economic regulation – accountability, focus, predictability, coherence, adaptability and efficiency – fit for purpose; and if not; how should they change?

14.1 The UK's regulatory regime has succeeded in incentivising efficiency and innovation, by seeking to align the interests of shareholders, managers and consumers. Regulators should create incentives for utilities to innovate and to seek to do more for less. But where firms are able to deliver this through investment, good management and taking greater risks, it is fair that shareholders should retain some of the returns. The UK has a regulatory framework that is able to strike this balance, and it is important this is not lost.

14.2 Since privatisation (and until recently) the UK economic regulators had built a track record of transparent and predictable regulation, which put the government's principles for economic regulation at the heart of the regulatory policymaking. Investors have deployed capital to the UK's regulated infrastructure based on these principles being core to the UK regulatory approach.

14.3 These principles continue to remain fit for purpose and should remain at the heart of the UK's approach to economic regulation. The presence of these principles and adherence to them are assessed during due diligence procedures for capital allocation decisions. These principles or variants of them are also used by a range of independent organisations to measure the strength of regulatory regimes.

14.4 Investors feel unable to challenge regulators when they fall short of these principles because the only realistic option to challenge is via a full-scale CMA appeal, which is not an appropriate tool to use in most circumstances, and in any event investors themselves lack standing to appeal.

14.5 The overall impact of regulators failing to maintain these principles of regulatory good practice is to make the overall regulatory framework in the UK less attractive to investors.

14.6 While regulators make policy within a wider economic and political environment, adherence to these core principles of good practice should be possible at the same time as taking account of wider factors. Given the importance of these factors both for long term planning and for financing infrastructure, investors would welcome the opportunity to strengthen both these principles and the enforceability of regulators' duties to observe them.

14.7 We would therefore suggest three improvements to the regulatory regime:

(a) Strengthen the current statutory duty to have regard to principles of best regulatory practice. The existing duty is currently vague and very difficult to enforce.

(b) Make more explicit the duty to have regard to the need for licence holders to secure long term investment. This would supplement the current financeability objective for efficiently managed companies to earn returns commensurate with their cost of capital.

(c) 'Stability' should be added to the list of principles. Regulatory stability (in conjunction with predictability) is key to unlocking a lower cost of capital for investment, ensuring that consumer outcomes are delivered at lowest cost in the most efficient manner possible.

14.8 Investors' views on the importance of these principles are aligned with the OECD and the independent credit rating agency Moody's:

(a) The importance of transparency and predictability for regulatory regimes has also led to the OECD Framework for Investment Policy Transparency.[37]

[37] https://www.oecd.org/daf/inv/investment-policy/40287306.pdf

(b) Moody's rating methodologies for both regulated water and energy networks emphasizes the importance of a transparent and predictable regulatory framework. Moody's methodology gives a 40% weighting to "Regulatory Environment and Asset Ownership Framework", for determining a credit rating, noting that "the predictability and supportiveness of the regulatory framework in which a network operates—as well as the legal and political framework that underpins it—is a key credit consideration."[38] Moody's methodologies limit the highest rating for regimes with political interference as 'Ba' for the 'Stability and Predictability of the Regime' component. This is applied where "tariff setting is subject to negotiation and political interference".

15. How can regulators act in the future to support public trust in the regulatory system for water, energy and telecoms?

15.1 Increasing levels of public trust in the regulatory model and asset ownership framework will be important to retaining long-term investor confidence in the sectors. Regulators should be prepared to make the case for the current regulatory framework by publicising its successes. Three key ways this could occur are:

(a) Regulators could improve public trust, by adopting practices and measures which demonstrate themselves to be responsible expert bodies balancing current and future needs. Regulators can achieve this by demonstrating that long-term planning and investment for future consumers is taking place.

For example, in the water sector this could be articulating to the public how the regulator is holding the sector to account for performance today, whilst ensuring prudent investment occurs today to ensure adequate provision of infrastructure in future.

(b) Regulators could also improve levels of public trust by conducting regular international benchmarking exercises to compare sector performance in the UK with other overseas markets. This would help consumers, regulators and operating companies, putting in context their performance and productivity levels. This would be particularly welcome in the water sector.

(c) Public trust in regulators and the regulatory framework could be enhanced through improving public understanding of the role of the regulators, and in particular, how regulators are distinct from both government and industry bodies.

15.2 Improving the understanding of the long-term challenges for the sectors, and the steps that regulators and companies are taking to address them, could help increase public buy-in for outcomes. For example, in the case of gas networks a long term education and awareness campaign about the costs of decarbonising heat could help smooth the path to an understanding that capital investment (and resulting higher consumer bills) will be necessary.

[38] Moody's Regulated Energy Network Credit Rating Methodology.

ANNEX 1
List of Full GIIA Members

3i Group plc
Abu Dhabi Investment Authority
Alberta Investment Management Corporation
Alinda Capital Partners
Allianz Capital Partners GmbH
AMP Capital
Antin Infrastructure Partners
APG Asset Management N.V.
Aquila Capital
Arcus Infrastructure Partners LLP
Ardian
Argo Infrastructure Partners
Aviva Investors Global Services Limited
Basalt Infrastructure Partners LLP
Blackstone Infrastructure Partners
British Columbia Investment Management Corporation
Brookfield Infrastructure Group L.P
Caisse de depot et placement du Quebec
California Public Employees' Retirement System
Canada Pension Plan Investment Board
CBRE Caledon
Corsair Infrastructure Partners
Credit Suisse Energy Infrastructure Partners AG
Dalmore Capital
DIF
DWS
EDF Invest
First State Investments
GIC
Global Infrastructure Partners
Goldman Sachs Infrastructure Partners
Hermes Investment Management
IFC Asset Management Company, LLC
IFM Investors Pty Ltd
Infracapital
InfraRed Capital Partners Limited
Investment Management Corporation of Ontario
John Laing Group plc
Kohlberg Kravis Roberts (KKR)
Macquarie Infrastructure and Real Assets (Europe) Limited
Marguerite Adviser S.A
Morgan Stanley Infrastructure Inc.
OMERS Infrastructure Management Inc
Ontario Teachers' Pension Plan
OPTrust
Pembani Remgro
PGGM
PSP Investments
StepStone Group Real Assets LP
Swiss Life Asset Managers
UBS Infrastructure Asset Management
Vantage Infrastructure
Wren House Infrastructure Management