

House of Lords Industry and Regulators Select Committee

Ofgem and Net Zero Inquiry Response Submission reference – WOV088648

Sunday 22nd August 2021

1. Background to GIIA

1.1. Global Infrastructure Investor Association (GIIA) is the membership body for the world's leading investors in infrastructure, and advisors to the sector, who collectively represent nearly US\$1 trillion of infrastructure assets under management across 66 countries. Our members are investing today to provide the smart, sustainable, and innovative infrastructure needed for our communities and economies to thrive.

1.2. The investor member base of GIIA is diverse and ranges from fund managers, pension funds, insurers, corporate investors and sovereign wealth funds (a list of GIIA members can be found at <http://giia.net/membership>).

1.3. In the UK, GIIA members are responsible for:

- £27bn invested in 158 assets consisting of traditional energy and renewables.
- 16.2GW of installed capacity across a 210,000 km electricity and gas distribution network.
- Major investments in 17 of the UK's 20 airports, which account for 94.4% of total passengers.
- Supporting almost 120,000 jobs in the nation's privately owned ports.
- Supplying 2/3 of UK household's water needs.
- Providing an additional 14 million households with full fibre internet while continuing to invest in 5G technology.
- Producing 32% of the UK's entire renewable energy capacity.

1.4. In addition to these vital sources of foreign direct investment, our research shows that more than 8.5 million UK pension pots are invested in UK national infrastructure via specialist infrastructure funds, helping to deliver a stable return for UK citizens in their retirement. In transport, renewables, utilities, digital and social infrastructure, GIIA members are investing across the UK to deliver the infrastructure needs of UK citizens and supporting the wider economy.

2. Infrastructure investment gap and Net Zero

2.1. The UK, along with many of the world's leading developed economies, faces a growing infrastructure gap¹, exacerbated by years of underinvestment by successive governments and an absence of attention paid to the role that private investment can play in relieving the pressure on the public balance sheet, to ensure that the UK gets the infrastructure that it needs for future generations.

2.2. The investment gap in economic infrastructure will amount to \$5.5tn (£4.4tn) globally between 2017 and 2035, according to the McKinsey Global Institute. Other estimates suggest that the gap is even starker. Oxford Economics forecasts a

¹ World Economic Forum, The world is facing a \$15tn infrastructure gap, (2019) [URL](#)

cumulative shortfall of \$15tn (£11.9bn) between 2016 and 2040. The Green Alliance estimates that a £11.4bn investment gap currently exists in the UK and will rise to £13.5bn in 2022.²

- 2.3. The scale of the finance required highlights the critical role that private investment will have to play if this gap is to be filled. The UK government Infrastructure Finance Review also states that over the next 10 years around half of the £600bn infrastructure pipeline is forecast to come from the private sector through electricity networks, digital infrastructure, airports and water and waste³.
- 2.4. In terms of the UK energy sector, National Grid forecasts that significant investment will be needed to expand and repurpose the networks - by 2050 there will be a total of 293GW of installed electricity capacity, 100GW more than the current figure today.⁴
- 2.5. GIIA research also shows that only 37% of UK citizens are satisfied with the UK's national infrastructure while 82% agree that infrastructure is vital to future economic growth, and 65% feel that the UK is not doing enough to meet its infrastructure needs⁵.
- 2.6. Research by PwC in partnership with the Global Infrastructure Investor Association and separately by the Committee on Climate Change (CCC) have indicated that the UK needs to spend an additional GBP40-50bn¹ per annum through the 2020's to meet Net Zero, half of which is not currently covered by existing policy and regulation.⁶

3. Need for strong policy and regulatory frameworks

- 3.1. For the last 30 years in the UK, good economic regulation has supported high levels of investment in the UK's regulated sectors and should be celebrated as a successful model that has been reproduced around the world. Broadly speaking, it has been accepted by the regulators and the regulated sectors that the model has delivered good outcomes for consumers whilst at the same time unlocking investment that the public sector would have otherwise been unlikely to deliver alone.
- 3.2. We are now, however, facing the significant challenge of how to decarbonise UK infrastructure in line with the legally binding commitment to deliver Net Zero emissions by 2050 – something hitherto never done before by a developed economy.
- 3.3. Out of this, there has emerged the need to conduct a difficult balancing exercise between the commendable ambition of keeping costs low for consumers in the short term and the need to deliver the long-term investment for Net Zero without placing an unfair costs burden on future consumers.

² Edie News, Infrastructure Policy Placing UK's NetZero target at risk think tank warns, (2020) [URL](#)

³ HMG Infrastructure Finance Review (2019) [URL](#)

⁴ Arup, Future of Energy: Regulatory models for the energy system shifts, [URL](#)

⁵ GIIA, Global Infrastructure Index, (2020) [URL](#)

⁶ PwC, Unblocking Capital for NetZero Infrastructure, (2020) [URL](#)

- 3.4. Unfortunately, however, recent regulatory determinations (including that proposed by Ofgem as part of the RIIO-ED2 price control process) have sought to prioritise short-term bill reductions at the expense of long-term investment. There has also been a perceived politicisation of regulators in recent years, which has undermined confidence by investors in the UK's model of economic regulation.
- 3.5. This can be illustrated with the fall in UK FDI having peaked at a high of £192.6bn in 2016 to just £35.6bn in 2019 – at the same time global flows of FDI increased by 3% to over £1tn. There are a number of reasons for this, but clearly the impact of an overly short-term regulatory model in regulated utilities has not helped to increase investor confidence and investment in the UK energy sector.⁷
- 3.6. GIIA recommends the following steps for Ofgem to take to help to play its role in delivering the investment that is needed in the future:

4. Recommendations for Ofgem

- 4.1. Ofgem should be required to consider the long-term impacts of price control determinations beyond the period of that particular settlement. This should be set out clearly in guidance from Government through the Strategic Policy Statement process. This is particularly important in the delivery of Nature Based Solutions in the energy sector, which require longer-term thinking and incentives structured over the life of energy infrastructure assets, anticipating whole-of-life-cost, rather than through the prism of a five-year price review period.
- 4.2. Ofgem should also seek to strike a fairer balance between risk and reward in price determinations. Allowed returns should be set at a level that is reflective of a realistic assessment of risk to incentivise innovation and investment and reduce the risk of underinvestment.
- 4.3. Ofgem should seek to remove dampened incentives to innovate and return to a system where incentives encourage investment in innovation. Moreover, streamlined regulation would ensure that companies are free to take risks which would deliver benefits to consumers through increased efficiency and higher service levels.
- 4.4. Perhaps most importantly, Ofgem should strive for intergenerational equity within the cost of infrastructure and ensure that consumers gain the best value for money in the short term. The interests of future generations and consumers needs to be protected including delivery of any major capital investment to tackle long term policy objectives such as Net Zero.
- 4.5. Regulators should push for a coordinated effort across regulated markets to aim for consistency and aid cross-sector investment. Greater electrification of heating and transportation will create a new generation need with a greater use of renewables and energy storage. In order for storage to help push the UK towards our goals, regulators should provide clear policies which ensure incentives for their use within our energy system. Ofgem and BEIS should likewise develop policies which reward the development of innovation and new technologies appropriately.

⁷ CBI, Delivery Smart Regulation that Supercharges Innovation and Investment, (2021) [URL](#)

5. Ofgem and Electric Vehicles

- 5.1. In terms of specific technologies, electric vehicles (EV) clearly have a crucial part to play within the transition. Currently, the electricity system can cope with the demand of 200,000 EVs on the road, however once the EV numbers go above 25% of total cars on the roads this will not be enough. As levels approach 50%, substantial investment will be needed within electricity networks to reach higher capacity. Under the current regulation, utilities lack the ability to invest into their networks ahead of need.⁸
- 5.2. This will push operators and investors to wait until regulators force them to act and create delays in critical underinvested areas of infrastructure such's as EV charging, hydrogen and CCUS. Ofgem should therefore look at a whole-system-approach to EV Charging regulation whilst re-evaluating incentives throughout the value chain and lowering the barriers for entry. Further value should be stacked across the chain so that each party has an incentive to reach. In the US for example, storage owners can sell into the capacity market or into the frequency regulation market and this could be an approach to be developed in the UK.⁹
- 5.3. The expenditure required to achieve the UK's goals of carbon neutrality highlight the importance of a relevant risk and reward framework and net zero Outcome Delivery Incentives (ODI's) that guarantee the risk reward balance is maintained.
- 5.4. As well as Ofgem, there is also a very important role that Government can play with regards to the strategic direction of the sector and the regulator to achieve Net Zero.

6. Recommendations for government

- 6.1. The energy sector regulator has never received a Strategic Policy Statement from Government. This leaves a vast policy lacuna which Ofgem has struggled to fill. It is therefore encouraging to see that the Energy White Paper points to a consultation in 2021 on an energy sector strategy and policy statement which will set out the strategic priorities of UK energy policy, the outcomes to achieve and the roles of government, Ofgem and other parties which are collectively responsible for delivering these goals.
- 6.2. GIIA investors welcome the opportunity to contribute to this approach which is fundamentally important to ensuring that Ofgem is clear on its regulatory duties and which ones to attach priority to, to support the energy transition. The SPS should be aligned with that provided to Ofwat in the water sector and other core infrastructure sectors to ensure that the direction of travel remains consistent and strategic.
- 6.3. It is encouraging too that the Government recognises the scale of the challenge – in a letter to Ofgem CEO Jonathan Brearley in October 2020, former Minister, now Secretary of State for BEIS, Rt Hon Kwasi Kwarteng MP said: “Appropriate investment in physical infrastructure by distribution companies, including ensuring

⁸ Frontier Economics, Regulating for a NetZero Future, [URL](#)

⁹ Utility Week, Regulatory Shake Needed to hit NetZero, (2019) [URL](#)

efficient and timely connection, will be important for the deployment of these [energy] technologies, and Ofgem's price controls will be fundamental to this, with RII0ED2 setting the methodology under which distribution networks will invest ahead of need¹⁰." While helpful in clarifying the need for investment, the letter has no legal or statutory basis, so a clear strategy and policy statement needs to be delivered which Ofgem has a legal obligation to live up to.

- 6.4. Furthermore, the government needs to set out a substantial Energy Bill in 2022 as a refresh of the Energy Act of 2013 which was enacted during a time when the UK produced 40% of its electricity from coal. The government should seek to modernise the energy system to support the transition for NetZero and support infrastructure investment in a range of low carbon generating technologies such as solar, wind and nuclear through the Energy Bill. The Bill should also develop a framework to support and incentivise technologies such as hydrogen, storage and CCUS.¹¹ The new UK Infrastructure Bank could have a role here, but it should be clear on the mandate to focus on creating additionality in the market through taking on risks that private investors would not ordinarily take on.
- 6.5. Finally, it is also encouraging to see the establishment of the UK Government Office for Investment and the role it will play in ensuring that the right signals are sent to show the UK is open to investment. The Office for Investment should have a clear objective to play a coordinating role across government departments, sharing expertise and best practice on infrastructure investment and acting as an interlocutor between the private and public sectors on infrastructure delivery.

7. Summary

- 7.1. To achieve the ambition for Net Zero, greater levels of investment will be required than that which is currently taking place, and emerging technologies will require innovative frameworks to incentivise low costs and bring additional private capital into play. The role that economic regulators such as Ofgem can play in terms of providing incentives to enable this much needed private investment cannot be underestimated.
- 7.2. Net Zero infrastructure needs to be delivered at low cost, pace and scale. This has already been proven with the success of UK renewables, which shows that a nascent technology with the right access to low-cost capital can have impressive momentum and progress. Creating a long-term Net Zero infrastructure road map and policies supporting crowding in private capital can help. Ofgem should seek at all times to incentivise innovation, drive service delivery and enable the investment needed to meet the challenge, through a long-term view of economic regulation above and beyond the five-year price review period.

8. Contact details

- 8.1. For more information about GIIA and the contents of this submission please contact Vlad Benn, Policy and Research Executive, GIIA:

¹⁰ Letter from Minister Kwasi Kwarteng MP to Jonathan Brearley, CEO, Ofgem (October 2020), [URL](#)

¹¹ Energy UK, Policy before the Bill, (2021) [URL](#)

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