**Ofgem: Open letter on the RIIO-2 Framework**

Response by the Carbon Capture and Storage Association

The Carbon Capture and Storage Association (CCSA) is pleased to provide evidence to Ofgem in response to its letter on the RIIO-2 framework. The CCSA brings together a wide range of specialist companies across the spectrum of CCS technology, as well as a variety of support services to the energy sector. The CCSA exists to represent the interests of its members in promoting the business of Carbon Capture and Storage (CCS) and to assist policy developments in the UK, EU and internationally towards a long-term regulatory framework for CCS as a means of abating carbon dioxide (CO2) emissions.

In the context of this call for views, the CCSA represents a range of organisations with an interest in CCS for a wide range of applications including reducing industrial emissions, producing low carbon heat, and low carbon power generation. The successful application of CCS in the heat and power sectors relies heavily on energy networks, and of particular interest is the retention of the UK’s upgraded gas networks in order to enable the widest range of decarbonisation options for the UK’s heat sector in the 2020s and beyond. The CCSA supports the innovative projects being brought forward by gas network operators to explore possibilities for low carbon hydrogen to replace natural gas for domestic and industrial heat, and welcomes Ofgem’s role in supporting this innovation through RIIO-1.

**Answers to questions:**

1. **Do you agree with our overarching objective for RIIO-2 and how we propose to achieve it?**

The CCSA welcomes Ofgem’s objective for RIIO-2, noting that as well as providing value for money, it is important to ensure that companies are delivering services fit for a low carbon future, looking beyond the next price control period. To meet its legally binding commitments under the Climate Change Act the UK will need to rapidly decarbonise heating from the mid- 2020s into the 2030s[[1]](#footnote-1), so allowing for innovation to take place now to maximise options for delivering low carbon heat cost effectively in the future will be essential.

**2. How can we strengthen the consumer voice (primarily end-consumers), in the development of business plans and price control decisions?**

**3. How should we support network companies in maintaining engagement with consumers throughout the price control period?**

**4. Does this structured approach to defining outputs provide the right level of clarity around delivery?**

**5. How can the outputs framework be improved, including the introduction of additional output categories for example around efficient system operation for distribution network companies?**

**6. Did the outputs target the right behaviours?**

**7. How can we address areas of expenditure for which a clear output is difficult to define?**

**8. Were the output targets and associated financial incentives set for RIIO-1 appropriate, reflecting what consumers value and are willing to pay for?**

**9. What changes in the RIIO framework would facilitate returns that are demonstrably good value for consumers?**

**10. How can we minimise the scope for forecasting errors?**

**11. What constitutes a fair return for a regulated monopoly network company, and how can we ensure that returns remain legitimate in the eyes of stakeholders?**

**12. What factors do you think are relevant for assessing and setting the cost of capital so it properly reflects the risks faced by companies?**

**13. Can we improve our methods for the indexation of the costs of debt and equity?**

**14. Are there specific amendments to any core aspects of financeability that we should be considering in light of performance during RIIO-1 and the change in the financial environment?**

**15. Should we consider moving to CPIH (or another inflation index) and how should we put into effect any change to ensure it is present value neutral for investors?**

**16. Do you think there are sufficient benefits in aligning the electricity price controls to off-set the disadvantages we have outlined?**

**17. Are there any other realignment options we should consider?**

**18. What amendments to the RIIO framework, if any, should we consider in supporting companies to make full use of smart alternatives to traditional network investment?**

The CCSA welcomes proposals to make best use of existing infrastructure in both the gas and electricity networks. As well as reducing the need for new network infrastructure, it is important to realise the full value of recent investments. Around £3.8bn was invested in the GB gas networks (Totex) between 2010 to 2014[[2]](#footnote-2), primarily on upgrading the gas distribution network to polyethylene. However, analysis by the UK Energy Research Centre (UKERC) has concluded that, in order to meet the UK’s 2050 climate targets, gas consumption without CCS must be phased out over the energy system over the next 35 years and removed entirely by 2050[[3]](#footnote-3). Repurposing the newly upgrading gas distribution network to 100% hydrogen would provide a decarbonisation pathway for the heating sector and prevent the infrastructure from becoming a ‘stranded asset’ in a decarbonised economy. Furthermore, using existing infrastructure to decarbonise heat would reduce the need for reinforcement of the electricity grid that would likely be needed in a high electrification scenario. A recent study by KPMG concluded that the cost of a fully electrified heating system could be up to three times the amount of repurposing the existing gas grid, due to the need to decommission gas infrastructure and significantly reinforce electricity networks. This could amount to an additional cost to the consumer of over £200bn to 2050[[4]](#footnote-4).

Currently the most readily available and cost effective route to producing low carbon hydrogen at scale is through Steam Methane Reformation (SMR) of natural gas with CCS[[5]](#footnote-5). As outlined elsewhere in this response, gas networks are actively exploring the opportunity to transition to low carbon gas in innovative pilot projects that capitalise on the UK’s modern gas infrastructure and available CO2 storage capacity. A decision on the preferred route to decarbonise heat will need to be taken in the early 2020’s.

**19. Given the uncertainty around demand for network services, how much of an issue might asset stranding be and how should this risk be dealt with?**

As above, depending on the options chosen for decarbonising heat in the 2020s and 2030s, there is a risk that gas networks may become stranded assets. The Committee on Climate Change has advised that a “no CCS” scenario would lead to extensive decommissioning of gas network infrastructure by 2050.[[6]](#footnote-6) To address this risk, support should be given for innovation in decarbonising the gas grid, alongside the other areas of innovation previously identified. In the short term, this could include hydrogen blending to a level still compatible with current appliances, to enable the development of a supply chain.

**20. How do we need to adapt the RIIO framework, and the uncertainty mechanisms in particular, to deal with this uncertainty?**

**21. Is an eight-year price control period with built-in uncertainty mechanisms still appropriate given the greater range of plausible future scenarios?**

The Government is currently undergoing a heat options strategic review, with the intention of being able to take a strategic decision on the decarbonisation of heat in the early 2020s. A key part of this decision will be whether the gas networks are repurposed for use with hydrogen. The Oxburgh Report on CCS in the UK estimated that if this route were to be chosen, to begin implementation work in the 2029-2037 regulated period would require considerable planning and development work to be performed in the 2021-2029 period[[7]](#footnote-7). Therefore longer price control periods should be considered to allow for planning for future investment.

**22. What improvements should be made to the assessment of business plans?**

**23. Should we give further consideration to companies’ historic performance against their business plans?**

**24. Should we determine the revenues an “efficient” network company requires before seeking information from the companies themselves?**

**25. What has an eight-year price control period allowed network companies to accomplish or plan for that would not have occurred under a shorter price control period?**

**26. How well has the IQI and efficiency incentive worked in revealing efficient costs through the business plan process and encouraging efficiency throughout the price control period?**

**27. What alternative approaches could we consider to encourage companies to give us high quality information that minimises the damage from their information advantage?**

**28. What impact has the innovation stimulus had on driving innovation and changing the innovation culture?**

The innovation stimulus has had a significant impact on driving innovation within gas networks. The Leeds H21 project, which has contributed significantly to exploring the potential for a 100% hydrogen heat network, has been made possible by the Network Innovation Allowance. Similarly Cadent’s proposals for a Liverpool- Manchester hydrogen cluster came out of a feasibility study funded by the Network Innovation Allowance. Also SGN’s 100% Hydrogen Project is supported from this fund and aims to establish a pilot trial of a 100% hydrogen network. These projects are contributing to addressing one of the biggest challenges facing the UK economy in the near future: how to decarbonise the UK’s gas-dominated heat sector at reasonable cost to the consumer. These contributions are vital to maintaining options for decarbonising heat while future government policy remains uncertain.

It is important that Ofgem works with BEIS, the networks, and wider energy stakeholders to ensure that innovation activities under the RIIO-2 Framework demonstrate both clear benefits to consumers and considering the actions needed to deliver on carbon budgets. As mentioned throughout this response, CCS is a key component in the least-cost pathway to decarbonise heat. It is therefore critical that future investments in network innovation are aligned with other complimentary sectors including CCS, as part of a wider energy strategy.

**29. Have the incentives inherent in the RIIO model encouraged network companies to be more innovative and what should we consider further?**

**30. Do you agree that the scope of competition should be expanded in RIIO-2? What further role can competition play?**

**31. Which elements add the most complexity and how do you think that these and the broader RIIO framework could be simplified?**

**32. What improvements could be made to the format and presentation of the business plans?**

**33. Should the plans be revised at any stage during the price control, for example annually?**

**34. Should we retain fast tracking and if so, for which sectors?**

**35. Do we collect the right information in the right format and are there better ways to monitor the performance of companies?**

**36. What are your views on how the changing role of the electricity SO should be factored into the RIIO framework, including whether or not the electricity SO should have a separate price control?**

**37. Do you agree with our broad stakeholder engagement approach set out above?**

The CCSA welcomes Ofgem’s proposals for stakeholder engagement, and would be willing to commit time to participate in this engagement as appropriate.

1. Committee on Climate Change, Next steps for UK heat policy, October 2016 <https://www.theccc.org.uk/publication/next-steps-for-uk-heat-policy/> [↑](#footnote-ref-1)
2. [Delivering UK Energy Investment](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/394509/DECC_Energy_Investment_Report_WEB.pdf): Networks, DECC. [↑](#footnote-ref-2)
3. The future role of natural gas in the UK (UKERC 2016) [↑](#footnote-ref-3)
4. KPMG, 2050 Energy Scenarios: The UK Gas Networks role in a 2050 whole energy system, 2016 [↑](#footnote-ref-4)
5. Zero Emissions Platform, Commercial Scale Feasibility of Clean Hydrogen, 2017 [↑](#footnote-ref-5)
6. Committee on Climate Change, Next steps for UK heat policy, October 2016 <https://www.theccc.org.uk/publication/next-steps-for-uk-heat-policy/> [↑](#footnote-ref-6)
7. Parliamentary Advisory Group on CCS, Lowest cost decarbonisation for the UK: the critical role of CCS, 2016 [↑](#footnote-ref-7)