

09 December 2019

How we have responded to CEG and R2CG comments



Contents

Introduction	1
How we responded to R2CG feedback	1
How we responded to CEG feedback.....	11

Introduction

This document explains how we have responded to CEG and R2CG feedback. The CEG Challenge Log, when it has been issued by the CEG, is provided as Appendix 05.08. In addition to the Challenge Log, the CEG provided formal feedback on our 1 October Plan. The RIIO-2 Challenge Group (R2CG) also provided feedback on that version of our plan.

How we responded to R2CG feedback

The R2CG provided feedback on our 1 October 2019 plan, and asked us some specific questions. The table below summarises how we have responded to these points.

Ofgem requirement	Key Themes	Comment	Response
Giving consumers a stronger voice	Show the impact of engagement	There has been a considerable amount of engagement but its impact on the plan could be more clearly set out.	We have described how our 6 phases of enhanced engagement have developed our 4 customer outcome areas, 17 customer priorities and over 40 separate output cases in our revised Executive Summary. We have supplemented this with a clearer narrative of the engagement approach we have taken in Chapter 5 (Enhanced Engagement) and restructured Chapter 7 to clearly show how each commitment has been influenced and informed by the engagement work we have done. We have then expanded these summaries in our Output Case appendices where we clearly show how we have engaged, with whom, for what purpose, the insights received and how we used these insights to develop our Output commitments.
Giving consumers a stronger voice	Justify your ongoing engagement strategy	A similarly large amount of activity is set out as part of your forward strategy. Explain more clearly which parts of this are the most important elements, based on what you have learned from the engagement done to date.	We have been much clearer in our ongoing Stakeholder Engagement Strategy to detail the aims of our engagement to help the reader to see the main focus areas. We have also included a section that explains our 'engagement journey' focussing on a look back to inform our strategy going forwards. The inclusion of output case specific

Ofgem requirement	Key Themes	Comment	Response
			engagement plan (summaries) also is intended to provide the reader with more clarity on our engagement priorities
Giving consumers a stronger voice	Explain the costs of ongoing engagement	You say the cost of your future approach will be a minimum of £3.8m pa across your networks. Please clarify whether all these costs are in your baseline costs, and set out clearly how you have assessed whether this is proportionate and represents good value for money.	This is now made clearer in the Stakeholder Engagement Strategy document and in Chapter 5. The ongoing direct cost of engagement is c.£2m, which is included in our base costs.
Giving consumers a stronger voice	Biomethane stakeholders	Please also clarify how your future strategy supports biomethane stakeholders.	We have included this in several areas of the plan. First, this is covered in Chapter 6 (Net Zero and a Whole Systems Approach). We have included this in the Stakeholder Engagement Strategy in a section on 'whole system thinking' and specifically in the engagement plan focusing on 'Entry Capacity Enablement'. We have specific output commitments in Part 3 of our EAP (covered in both section 7.4 of Chapter 7 and Appendix 07.04.00) to work with and facilitate biomethane development. See also Appendix 07.04.08, Entry Capacity.
What consumers want and value	Justify your proposals	<p>Explain your targets (eg for customer satisfaction and complaints), justify your spend (eg for GSOPs), justify bespoke incentives, including your option analysis, demonstrate cost effectiveness and stakeholder support, in particular from your CEG.</p> <p>The plan should show how totex forecasts map onto ODI's and PCD's.</p>	<p>Chapter 7 provides an overview of our commitments. The appendices associated with Chapter 7 provide detailed information on and justifications for all of our output cases. This fully addresses Ofgem's business plan guidelines and all of the feedback we have received from our CEG on the evidence that they would like to see in our plan.</p> <p>We have been explicit in Chapter 7 on the regulatory treatment and mapping of costs for each of our outputs.</p>
What consumers want and value	Evidence deliverability of vulnerability work	You need to do more to evidence how you will ensure delivery of your vulnerability work.	We set out our Customer Vulnerability Strategy at Appendix 07.03.00. This includes our views on how we will ensure deliverability of our plans. We cover the specific output commitments linked to our strategy in section 7.3 of Chapter 7, which includes our assessments of deliverability risks and their mitigation.

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			<p>The associated output cases (Appendix 07.03.09 to 07.03.12) provide further information on deliverability issues and how these will be addressed.</p> <p>We provide a write up of our assessment of the deliverability of 'beyond the meter' services in Appendix 12.00.</p>
What consumers want and value	Consider resource implications of new heat regulations	During RIIO-2, new regulations to ban gas boilers in new houses will come into force, impacting IGTs and gas engineering resources. At the same time, expertise may be needed for development of hydrogen. What are the resourcing implications and how do you plan to address them?	We have set out how we intend to support the transition to Net Zero in Chapter 6 including our approach to whole system solutions (see, in particular, section 6.3 which explains how our plan addresses different pathways). In Chapter 9, we have considered various future energy scenarios and the ENA core scenario for their impact on our plan and set out how our plan will be able to flex to these outcomes. However, given that the precise impact of these regulations are uncertain, Chapter 10 sets out our approach to managing this and other uncertainties. We are confident that our plans will allow us to flex to emerging needs in this area.
What consumers want and value	Biodiversity	The intention to improve environmental management at sites is welcome but there is little evidence as to how this will be delivered and the aim to put in place plans on enhancing biodiversity needs some more substance.	We have added additional information on our biodiversity approach, but also set out the context of this as part of Cadent's overall environmental footprint. We have now provided our updated detailed Environmental Action Plan (Appendix 07.04.00). Chapter 7 (section 7.4) sets out our environmental commitments, including in relation to environmental management and biodiversity.
What consumers want and value	Set biomethane ambitions into context	Biomethane ambition to 2026 needs to be set against alternative scenarios for fuel mix in 2050, rather than the single one presented.	Our plan does not rest on a single scenario. We have determined uncertainty mechanisms, including revenue drivers, that would allow us respond to alternative scenarios for fuel mix and scale of biomethane development (see Appendix 10.09 for our uncertainty mechanism on entry charging and access).
What consumers want and value	Provide more the EAP in the main plan	In general, we would expect to see more of the substance of the EAP in the main business plan.	We have expanded the discussion of the EAP in the main plan, and included all of our environmental actions.

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What consumers want and value	Use of smart meter data	What are your plans to use smart meter data to improve network planning and possibly identify capacity and also opportunities to reduce gas pressures (and leakage)?	We have set out our data and digitisation strategy in Appendix 07.02.02. This discusses how we plan further to integrate data in our decision-making. As the roll-out of smart meters continues, data from these meters will be an important source of insight. We are continually assessing the value of becoming a data user of the DCC and we have included an uncertainty mechanism which would be triggered if doing so would be in customers' interests (Appendix 10.06).
What consumers want and value	Impact of heat pumps	There is some evidence that NetZero is causing a significant shift towards heat pumps for new commercial buildings and away from gas, particularly in cities. Is this something you are seeing and what are the implications for your assets?	We are not seeing this shift in our areas. However, were this trend to emerge, it would impact on demand and could be addressed through the uncertainty mechanisms that we have proposed (see Appendix 10.11).
What consumers want and value	Biomethane	How have you engaged on biomethane with your customers? For example, to reduce the cost of biomethane injection and ensure efficient use of biomethane in the gas system?	We engaged with biomethane customers throughout the development of our plan by means of our Biomethane Forum. We plan to formalise and extend this engagement through RIIO-2. Our engagement and plans with this customer community are detailed in Chapter 6 (section 6.1.1 and 6.1.2 and 6.3.1. Appendix 07.04.08 We have set out our proposals for entry enablement and connections standardisation which are targeted at ongoing engagement and optimising the commercial regime for renewable producers.
Driving efficiency through innovation ...	Funding of innovation projects	Please clarify whether your innovation projects refer to BAU innovation out of totex, or plans to use NIA.	Our strategy relates to all innovation, and our cultural journey to expand our focus on innovation in a broad sense. We acknowledge the tighter criteria/ scope of NIA in RIIO-2 but intend to sponsor a broader focus on innovation in RIIO-2 through one strategy to ensure clarity within our organisation. The chapter explains the proposed source of funding for each of our innovation themes.

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			We propose to use BAU totex, NIA and Strategic Innovation Stimulus for our innovation activity as outlined in the chapter.
Driving efficiency through innovation ...	Long-term benefits of innovation	The plan does not clearly explain how innovation will deliver benefits to consumers in GD-2 and beyond.	<p>We have identified ‘innovation themes’ and overall benefits associated with them. This is detailed in the Innovation chapter. Our forecast of the financial benefits of innovation are included within our cost forecast and make up a part of our 0.94% continuous improvement factor which directly benefits customers bills.</p> <p>Innovation funded through our BAU activity will deliver financial benefits in RIIO-2 because it has a relatively high technical readiness level and will be deployed relatively quickly. We haven’t created a forecast of benefits beyond RIIO-2 financially but in principle believe there is scope for the savings to continue into finto RIIO-3.</p> <p>For innovation that does not give a financial benefit (e.g. service or safety improvement), but has a relatively high technical readiness level, we would expect to deliver benefits in RIIO-2.</p> <p>For low technical readiness (e.g. whole system solutions, untethered robotics), the benefits will be delivered beyond RIIO-2 and we propose to use NIA funding or Strategic Innovation Stimulus to support the deployment.</p>
Driving efficiency through innovation ...	Innovation from other sources	What innovation have you identified from other similar companies (e.g. EU based) that could be bought to the UK?	<p>Through the ENA Gas Innovation Governance Group, we work closely with other DNs and have examples of where we have identified the innovation and used it directly in our networks and built upon it (e.g. Microstop and CISBOT). The new innovation appendix includes a table that captures what technologies and products we have obtained from overseas industries and suppliers.</p> <p>Much of the collaboration work we have done in robotics to reduce disruption to our customer is based upon innovation used else where internally e.g. internally gas and oil industry, sewage industry in Japan.</p>

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			<p>We are also members of the European Pipeline Research Group ('EPRG') and Pipeline Research Council International ('PRCI'). These memberships have enabled us to gain access to international research to help build our understanding of the integrity of our assets.</p> <p>More recently we have undertaken 'Innovation Laboratories' using the EIC to carry out national and international 'trawls' of market ready innovation used internally to help us develop specific solutions facing our customer and business (e.g. services to customer in multi-occupancy buildings, customers in vulnerable situations).</p>
Driving efficiency through ... competition	Competition Action Plan	There is little information provided on native and early/late competition, with the plan stating that no projects fit in the £50m threshold (apart from hydrogen related). Effective procurement appears to be embedded within the plan – please describe your approach and the expected benefits for consumers.	We undertook extensive work to review our approach to competition that is now documented in our Competition Action Plan (Appendix 08.01). This addresses the feedback provided by the CEG.
Managing uncertainty	Justify uncertainty mechanisms	<p>We would welcome more information on how you have determined the potential cost and impact implications of risks and how they have been allocated between consumers and your company.</p> <p>Please set out the potential costs associated with these and justifications for any additional uncertainty mechanisms to those proposed in Ofgem's planning guidance.</p>	<p>We have provided Uncertainty Mechanism Cases for both proposed Cadent-bespoke and Ofgem-specified mechanisms. These case set out the cost and impact of each risk and justify the allocation between consumers and the company.</p> <p>Chapter 10 summarises our approach to managing uncertainty and the associated appendices provide detailed justification for our approach.</p>
Forecasting, scenarios and Net Zero	Net Zero	The plan sets out your Net Zero vision through to 2050 including a potential pathway aligned with their whole system plans. Please set out the actions you have considered for GD-2, including potential deferment of expenditure. Further detail on this analysis and the options you have considered is requested.	Chapter 6 describes how we propose to respond to the Net Zero vision. It includes views on alternative fuel mix scenarios and sets out the actions that we will take to facilitate these scenarios. Section 6.3 of Chapter 6 summarises how we have assessed this across the whole RIIO-2 plan.

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Forecasting, scenarios and Net Zero	Hydrogen by electrolysis	Have you considered any projects for injection of Hydrogen made by electrolysis?	As part of our considerations of HyNet and H21 we are considering the wider hydrogen economy and how hydrogen will be generated. We are coordinating with BEIS and industry on potential research projects on hydrogen production, storage and transportation. We are also contributing to the academic research on different energy pathways, for example the work of the Sustainable Gas Institute at Imperial College.
Forecasting, scenarios and Net Zero	German gas industry	Have you had any discussions with the German gas industry that has the same issue and also wants to facilitate biomethane without propane enrichment and hydrogen injection?	We are looking to establish further links with German companies to explore these issues.
Cost and financial information / Cost and efficiency	Explain reduction in totex between July and October	Your totex has reduced from July – please describe how this has been achieved, and any further actions you propose to take to improve your cost performance.	We have included a comparison between the costs in our July, October and December plans in the cost chapter. This explains the headline movements in cost and the factors behind this movement. Alongside this, in section 9.1 of the cost chapter, we have provided information on our transformation programme (how we are looking to drive efficiency) and how we have benchmarked our plan to ensure it is set at an efficient level (section 9.2).
Cost and financial information / Cost and efficiency	Explain repex profile	Repex - please provide a clear profile for your chosen mandatory and non-mandatory volumes, and associated unit costs, setting out the key changes and reasons for change over RIIO-1 and 2, including the efficiency gains you have realised.	Within the repex section of our cost chapter we have set out a summary of our workloads, phasing and cost profiles (Section 9.7). Appendix 09.02 provides more detail on all aspects of our mains replacement programme including key changes in workload, work mix and work type. The efficiencies are included in our repex trace (fig 9.013) with a brief explanation. Further detail on how these will be achieved is included in section 9.1 in the main plan (where we discuss our contracting strategy) and the associated Appendix (at Appendix 09.20 Resolving our Benchmarking Gap).
Cost and financial information / Cost and efficiency	Provide a detailed justification of costs	Engineering Justifications and CBAs: Further evidence should be provided to support expenditure plans, especially your approach to probability	We have provided detailed engineering justifications for all categories of spend requested by Ofgem, including major projects. These include an explanation of the asset type/project, the options we have assessed, cost benefit analysis and our recommended option. See

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		of failure, iron mains replacement, and explanation of unit costs.	associated Appendices to Chapter 9 for more detail on our approach (Appendices 09.00-09.02 and the detailed cases set out in Appendices 09.03-09.36).
Cost and financial information / Cost and efficiency	Hoford Salt Cavity	Holford Salt cavity E&I BPDT 09.15 Holford salt cavity E&I CBA - why is this facility required given fall in peak gas demand? The CBA says decommissioning in 2023 is not considered due to technical infeasibility – please explain.	This is outlined in the investment case for Holford Salt Cavity (Appendix 09.15). In brief, the NW network has the lowest storage of Cadent networks. Without the salt cavity, this storage would be less than half of the next lowest network, EE. If Holford (or equivalent storage) is not available there is potential for widespread inability to maintain minimum governor inlet pressures, leading to downstream loss of supply under a number of winter failure scenarios.
Cost and financial information / Cost and efficiency	Services Not Associated with Mains Replacement	Services Not Associated with Mains Replacement - £217.4m - This graph shows 13 incidents in the period 1990 – 2010. An updated graph to 2018 would be helpful and indicate if the level of risk is being maintained.	We have updated this graph.
Cost and financial information / Affordability and financing our plan	Present and analyse alternative (gearing) assumptions	You have not complied with Ofgem’s request that you should analyse key alternative inputs to those they propose; this particularly applies to gearing levels.	We provide analysis in our Appendix 11.01 Financeability of scenarios including the Ofgem prescribed scenarios. In addition, we provide additional scenarios eg level of gearing changing as requested.
Cost and financial information / Affordability and financing our plan	Reference tools.	Be clear in all submissions what models or tools your quantitative output is based on. We expect transparency (i.e. clear cross-referencing to supporting files) ... We expect ... submission of any model or tool used for any supplementary analysis included in the business plan, including bill impact estimations.	We source each table and chart to the model used for the analysis and will provide the models to Ofgem as part of our December submission. This includes the Ofgem LiMo model that we have reconciled to our bespoke regulatory models to gain comfort that results and scenarios are aligned and consistent. The LiMo model is the primary source of our analysis. Cadent-specific overlays (Eg domestic bills impacts, risk analysis, and reflecting the true economic cost of our debt in the actual company scenarios) are driven by the Cadent-specific models.

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Cost and financial information / Affordability and financing our plan	Enhance financeability assessment to include qualitative factors.	The plan is less clear on the financeability of the downside scenarios as it appears that these are assessed rather mechanically, focussing only on the quantitative ratios (without taking the impact of the qualitative rating assessment into account, as you had in July).	<p>We have made this clearer in Chapter 11 and the supporting appendices.</p> <p>We provide narrative on why we focus on quantitative assessment and how we understand that rating agencies will interpret the quantitative data i.e interplay between quantitative and qualitative measures in Chapter 11.</p> <p>We acknowledge that qualitative factors impact ratings and provide our assessment in Appendix 11.01. We comment on key financial metrics to focus attention on the KPIs that rating agencies prioritise. We note that Moody's grid-implied rating is likely to be constrained to the rating indicated by the level of its preferred key metric – Adjusted Interest Coverage Ratio ('AICR'). Moody's has reconfirmed its ratio guidance for energy companies with a minimum AICR of 1.4x for a Baa1 rating (in its UK regulated electric and gas networks sector comments issued in May 2018). Commentary from the major UK rating agencies is provided in Appendix 11.01 in summary format.</p>
Cost and financial information / Affordability and financing our plan	Further justify the position on depreciation and capitalisation rates	<p>You have rejected changes to both depreciation and capitalisation rates as routes to improving financeability but make somewhat contradictory statements as to whether rating agencies would accept these levers.</p> <p>You have not sufficiently explained why these measures, which were accepted in RII01, would not be feasible in RII02 nor do you appear to have given any consideration to a shortening of the regulatory depreciation period in the context of the future of the gas sector and the potential for stranded assets.</p>	<p>We have set out views in Chapter 11 and the supporting appendices.</p> <p>We have continued with policy decisions and measures taken in RII0-1 and believe them to be appropriate in RII0-2.</p> <p>We do not believe there is sufficient evidence that the useful economic lives of assets has changed, relative to policy decisions made in RII0-1. By using sum of digits depreciation methodology, depreciation is accelerated into the short term (current customers) which partially limits risk to future customers of bearing costs should assets be stranded based on future policy decisions.</p> <p>As we are financeable (assuming 4.8% return to equity) on notional and actual basis given the assumptions noted in the Plan, we have not proposed increasing bills for current customers without being confident that any change in policy can be supported by firm evidence.</p>

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			We provide evidence in Appendices 11.01 regarding how rating agency's view these levers (capitalisation rates and depreciation of asset lives) when assessing regulated businesses.
Cost and financial information / Affordability and financing our plan	Conduct further engagement	We can see that there may be reasons for having headroom in target ratios over the minimum required to maintain an investment grade rating (BBB-) but we have not seen evidence of consumer engagement indicating that they consider a BBB+ target better value than a BBB target.	We have given careful thought to the benefits of engaging with customers on target credit ratings. We discussed this with experts in the field of customer engagement (eg Britain Thinks) and, based on expert advice, rejected this approach due to the complexity of the subject matter. However, we have engaged substantively with specialists, debt and equity investors, and rating agencies. We provide an account of this in Appendix 11.01 (Section 2).

How we responded to CEG feedback

The table below explains how we have addressed CEG comments on the 1 October version of our plan. Where the source is referenced as being “CEG”, we mean the formal CEG reports on our 1 October plan. Where the source is referenced as being CEG(PTG), we mean the board presentation on the “path to green” made by the CEG. References to ‘CEG deep dive’ refer to the actions agreed with the CEG in the ‘deep dive’ sessions on our environmental outputs and on our Environmental Action Plan.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Track record and business plan commitment / Learning from past performance	Provide more detail on RIIO-1 cost performance	<p>Cadent's analysis of its RIIO-1 cost performance is surprisingly light.</p> <p>One of our outstanding challenges is for Cadent to set out more detail to allow the reader to understand the main drivers of outperformance, separating out those factors that are liable to be covered by uncertainty mechanisms in RIIO-2 such as RPEs and the pipe diameters and connection densities in the iron mains replacement programme. We would expect the residual to be analysed and linked to the RIIO-2 plan in a way that provides the reader with assurance that factors other than genuine efficiency are unlikely to systematically repeat in RIIO-2 and that the company has learned what it can, for example from its relative performance across regions.</p>	CEG, CEG(PTG)	We have expanded our discussion of our cost performance in RIIO-1. The discussion now explains how our cost performance differs between regions. At Section 4.03, the chapter also sets out the four main drivers for our repex performance.
Track record and business plan commitment /	Provide a more detailed analysis of returns	Other than the returns driven by reductions in costs (see above), Cadent's analysis extends little further than simply noting (immediately beneath figure 04.08) that it has performed well against ODIs. The CEG	CEG, CEG(PTG)	We have expanded the explanation of our returns in RIIO-1 and provided detail on the components of our overall returns.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Learning from past performance		considers the reader will need more detailed analysis to inform consideration of the company's proposals for RIIO-2. For example, what were the internal or external factors that drove ODI outperformance, how has this informed both service strategy and forecasting for RIIO-2 and how has it informed proposed benchmark/reference points for RIIO-2 ODIs?		
Track record and business plan commitment / Learning from past performance	Compare dividend to (actual) RORE	Although Cadent does indicate the level of dividend payments, it relates these payment levels to profits after tax, a statutory accounting concept, rather than post-interest (actual) RoRE. Doing the latter would better allow readers to relate dividend payments to the returns performance discussed earlier on the same page.	CEG and CEG(PTG)	<p>We are not convinced that a comparison between dividends and RORE would be helpful.</p> <p>Through Regulatory Financial Performance Reporting (RFPR) we show how RORE converts to equity returns after the inclusion of Enduring Value adjustments. There are several complexities with the using the RPFPR analysis to compare RORE to dividend yield:</p> <ol style="list-style-type: none"> 1. The Enduring Value concept skews earned returns to the end of RIIO-1 when a larger component of the work-load is being completed. This makes annual comparisons of RORE to cash yield difficult. 2. RORE indicates returns overall i.e cash yield + RAV growth. Cash yield is only one component of the return. 3. RORE does not take into account company / entity specific "in year" factors that may influence dividend decisions such as movements in working capital, changes in tax legislation, and changes in gearing.
Track record and business plan	Explain how the company avoids	Rather than discussing how it avoids any impact on consumer bills, Cadent's discussion focuses on the	CEG, CEG(PTG)	The RIIO-1 framework provides automatic protection for customers in the event that circumstances turn out

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commitment / Learning from past performance	adverse impact on bills	quality of its bill forecasting so that shippers have more certainty in the timing of revenue changes and can provide a more stable bill for the end customer. We do not consider this amounts to avoiding any impact on consumer bills.		different from expectations. However, we also took positive steps during RIIO-1 to mitigate the impact of uncertainty on customers. We describe these steps in section 4.5.
Track record and business plan commitment / Appendix: Delivery Plan	Deliverability	Cadent should continue to test its assumptions about the potential benefits of its transformation programme and its deliverability and seek to articulate this as fully as possible in its December business plan.	CEG	<p>We explain the gains from our transformation programme in Chapter 4 and Chapter 9. This discussion also sets out the benefit from the programme.</p> <p>Our board has led discussions to test the robustness of our delivery plans. These have also formed part of our assurance process. This is set out in Chapter 12 and Appendix 12.00.</p>
Giving customers a stronger voice / Enhanced Engagement	Impact of engagement	There has been a considerable amount of engagement but its impact on the plan could be more clearly set out.	CEG	<p>We have described how our 6 phases of enhanced engagement have developed our 4 customer outcome areas, 17 customer priorities and over 40 separate output cases in our revised Executive Summary. We have supplemented this with a clearer narrative of the engagement approach we have taken in Chapter 5 and restructured Chapter 7 to clearly show how each commitment has been influenced and informed by the engagement work we have done. We have then expanded these summaries in our Output Case appendices where we clearly show how we have engaged, with whom, for what purpose, the insights received and how we used these insights to develop our Output commitments.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Giving customers a stronger voice / Enhanced Engagement	Ongoing engagement	A similarly large amount of activity is set out as part of your forward strategy. Explain more clearly which parts of this are the most important elements, based on what you have learned from the engagement done to date	CEG	We have been much clearer in our ongoing Stakeholder Engagement Strategy to detail the aims of our engagement to help the reader to see the main focus areas. We have also included a section that explains our 'engagement journey' focussing on a 'look back' to inform our strategy going forwards. The inclusion of output case specific engagement plan (summaries) also provides the reader with more clarity on our engagement priorities
Giving customers a stronger voice / Enhanced Engagement	Cost of ongoing engagement	You say the cost of your future approach will be a minimum of £3.8m pa across your networks. Please clarify whether all these costs are in your baseline costs, and set out clearly how you have assessed whether this is proportionate and represents good value for money.	CEG	This is now made clearer in the Stakeholder Engagement Strategy document and in Chapter 5. The ongoing direct cost of engagement is c.£2m, which is included in our base costs.
Giving customers a stronger voice / Enhanced Engagement	Biomethane stakeholders	Please also clarify how your future strategy supports biomethane stakeholders.	CEG	We have included this in several areas of the plan, particularly in Chapter 6. We have then included this in the Stakeholder Engagement Strategy in a section on 'whole system thinking' and specifically in the engagement plan related to 'Entry Capacity Enablement'
Giving customers a stronger voice / Enhanced Engagement	"Golden thread"	Provide greater visibility of the link between stakeholder / wider insight and proposals made (incl. of any trade-offs that have been made).	CEG(PTG)	This is captured in detail in our Output Case appendices and we have held 'deep dive' sessions on these (through November) with key CEG members to explain, receive challenge and update accordingly. A full trace between insight proposals is provided in these documents and summarised in the revised format of outputs in Chapter 7.

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Giving customers a stronger voice / Enhanced Engagement	Best practice	Explain how you have benchmarked and applied good practice	CEG(PTG)	<p>There is a specific section in Chapter 5 explaining this. See section 5.8.</p> <p>Additionally, we provide evidence of how we have benchmarked our individual output commitment targets and approaches in our Output Case appendices</p>
Giving customers a stronger voice / Enhanced Engagement	Robustness of acceptability testing	Confirm that the acceptability testing was based on representative bill impacts	CEG(PTG)	<p>This is the case, but it is important to distinguish our 'acceptability' and 'business options testing' phases. Acceptability testing asked customers and stakeholders to assess the affordability of the whole plan. In doing so, customers and stakeholders received an explanation of how the bill was made up and the impact from RIIO-1 to RIIO-2, including the factors driving that impact.</p> <p>In BOT, customers and stakeholders were asked to choose options against various output commitments which were fully costed – i.e. they could see how much more they would be charged on their bill each year for superior levels of service.</p>
Giving customers a stronger voice / Enhanced Engagement	Stakeholder input	Demonstrate that Cadent engaged with the right stakeholders at the right time on the right issues (including business customers and future customers).	CEG(PTG)	<p>This is summarised in Chapter 5, but described in far more detail in the Appendices where we show a list of all of the engagement work that we have done, on which topics, with which stakeholders, the questions we asked and the insights received. These are followed up by the detailed Output Cases that describe how these insights were 'triangulated' to allow us to determine our business plan commitments.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				We engaged extensively with both business and future customers across aspects of the plan.
Giving customers a stronger voice / Enhanced Engagement	Ongoing engagement	Consider adhering to the AA1000 Stakeholder Engagement Standard. Consider committing to developing an ongoing engagement strategy for each policy area.	CEG(PTG)	<p>We have explicitly used this standard as a guide in our development of our segmentation tool and other aspects of our enhanced engagement approach. We have also committed (in our Stakeholder Engagement Strategy at Appendix 05.01) to formally assessing the merits of applying for accreditation by the standard.</p> <p>All output cases (and therefore policy areas) have an engagement plan documented (at a high level) in the Stakeholder Engagement Strategy and we have committed to maintaining these throughout the RIIO-2 period</p>
Giving customers a stronger voice / Appendix: [Data Strategy]	Engagement with new customers	Engagement focuses on current stakeholders; CEG would like to see plans to engage with future stakeholders (eg on data, see challenge 181)	CEG(PTG)	We have engaged with current and future customers and stakeholders to develop our plan. This is described in Chapter 5, in our Output Cases (the appendices to Chapter 7) and in our Stakeholder Engagement Strategy. In the latter, we also commit to ongoing engagement with future customers, noting that there are additional groups of future customers (than we engaged with to develop our Plan) whom we will seek to engage with on an ongoing basis, taking some learning from good practice noted as part of PR19 for certain water companies.
Giving customers a stronger voice /	Ongoing engagement with experts on	We are disappointed that Cadent has not engaged more expert stakeholder input which would help it benchmark its performance and give it ideas on how to	CEG	We engaged with several environmental experts through our business options testing phase, including the Green Alliance. We followed this up with further

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Enhanced Engagement	environmental commitments	strengthen targets. We expect this to be a part of the Stakeholder Management Plan process in future.		engagement through our Acceptability testing programme. We have received input from experts in the relevant organisations, but have been unable to get a formal response to our proposals from any organisation. In our ongoing Stakeholder Engagement Strategy, we have committed to continue to engage with expert stakeholders in numerous areas, including in aspects related to our EAP. We have developed output specific engagement plans, which are summarised in the strategy but will be developed further as we approach the start of RIIO-2. We note that ongoing engagement in this area will help us: to keep our plans up-to-date, to leverage good practice, and to ensure that our plans continue to deliver the outcomes that they have been established to deliver.
What consumers want and value (Customer Service) / Our commitments	Explain engagement strategy	<p>Although customer service permeated many customer discussions on various Business Plan topics, we are not aware that Cadent actually engaged its customers on the level of customer satisfaction they'd expect Cadent to reach, and how quickly their complaints and enquiries should be dealt with.</p> <p>Cadent to articulate its engagement strategy on customer service, including customer and stakeholder satisfaction and complaints handling.</p> <p>Cadent to explain to what extent customers have been consulted on the value they see in Cadent "establishing and raising the bar for all their customer and stakeholder experiences".</p>	CEG	This was covered in detail at the 'deep dive' session on the 5th November and there are two detailed output cases where we describe who we have engaged with, on what topics, the feedback received and how this has informed our plan: Establishing and raising the bar (07.03.01, and Rapid response to enquiries and complaints (07.03.03)

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
What consumers want and value (Customer Service) / Our commitments	Close gaps relating to GSoPs commitments	<p>The CEG sees a couple of small but important gaps relating to GSoPs commitments. The relatively poor performance in giving notice ahead of planned interruptions is not addressed. The plan also doesn't explain how and when Cadent will implement Ofgem's decision on automatic GSoPs compensation and how, in the meantime, customers who need to claim against GSoPs 3 and 13 will be assisted to do so.</p> <p>We would like to hear more concrete proposals for how Cadent will make it easier to make customers aware of their rights to compensation under GSoPs and to claim compensation and raise awareness of minimum standards, before automated compensation is implemented.</p>	CEG	This is captured in our 'Establishing and Raising the Bar' output case (Appendix 07.03.01). We describe the various outputs up front in the document, the first being GSOPs, in which we will automate GSOP payments.
What consumers want and value (Customer Service) / Our commitments	Explain and justify targets	<p>Most of the outputs in this area are about setting up new ways of measuring and reporting. The only output that can be measured in and of itself is improvements to household connection services. Though indeed a needed output, given the poor customer feedback in this area, Cadent has not explained what its targets are nor how it will measure progress against this output.</p> <p>Cadent to provide an updated optioneering appendix for the "establishing and raising the bar" commitment which should include costed options.</p>	CEG, CEG(PTG)	<p>Costed options have been included in all output cases, where relevant.</p> <p>The household connections improvements are included in a separate output cases and have been updated to bring out the clarity that was discussed in the output case deep 'dive session' on the 5th November.</p> <p>Targets will be based on timeliness of providing the front-end of the domestic connections process, which is where the main 'waste' and customer dissatisfaction is today.</p> <p>We have included options associated with the 'establishing and raising the bar' (Appendix 07.03.01) output case.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				<p>We are absorbing the costs (no incremental cost), hence they are all costed as zero. We are delivering the most stretching option.</p> <p>It is important to read across the suite of 'customer experience' output cases to fully see how we are going about increasing customer satisfaction – they all come together and will ultimately be measured in the 'establishing and raising the bar' output case</p>
<p>What consumers want and value (Customer Service) / Our commitments</p>	<p>Close gaps in proposals</p>	<p>At a strategic level, the CEG still perceives some gaps in Cadent's proposals.</p> <ul style="list-style-type: none"> • Cadent says they are moving towards a more regionalised delivery model. In contrast to that, the CEG doesn't believe that regional differences have been addressed to a sufficient extent in the plan. • The CEG is not clear how the various commitments strewn across the plan come together to a strategic whole to improve satisfaction for every type of customer and for every customer journey. Cadent told us that they conducted customer journey analysis and detailed segmentation of their customers. We would like to see a more strategic mapping of how the solutions suggested address the issues identified on each customer journey. 	<p>CEG</p>	<p>Regionalisation - From a macro engagement, perspective there is very little difference between what customers want in each of our areas. We can be confident with this statement as we have conducted a regionalised approach to our enhanced engagement programme with both customers and stakeholders. Indeed, our ongoing Stakeholder Engagement Strategy is focused on being 'centrally defined and regionally delivered'. All targets (where relevant) are based on network specifics and in a small number of cases, where there genuinely is a difference (e.g. London MOB) this is reflected by separate targets and several bespoke outputs.</p> <p>Customer satisfaction – we addressed this in the output case 'deep dive' session. The suite of outputs in the quality experience customer output area come together to deliver the improvements that we need to deliver. The plan brings these together better now by starting with our customer strategy, how we have engaged and links into a summary of each of these</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				<p>outputs one by one. They are each targeting on one or more aspect where customer satisfaction can be improved, or rather where customers have told us that it is an important area to them. The same approach has been applied to customer vulnerability, where we start with our strategy, which will be supported by each of the four output cases that fall under it</p>
<p>What consumers want and value (Customer Service) / Our commitments</p>	<p>Clarify position for household connections service improvement</p>	<p>Clarify whether household connections service improvement are indeed a standalone output and if so, a) how they complement the CSAT sent to connection customers, b) how performance will be measured, and c) your targets in this area.</p>	<p>CEG</p>	<p>This was discussed and explained in the Output case 'deep dive' on 5th November 2019. The household connections output has been written in the context of our overall Service Transformation Programme, which is an ongoing change project covering all seven customer journeys in the connections space.</p> <p>We have focussed on domestic customers to develop these bespoke outputs because this is the most advanced areas of our Service Transformation programme (as it impacts c.60 of all of the connections we make).</p> <p>As described in the output case (Appendix 07.03.04):</p> <ul style="list-style-type: none"> • The front end of the domestic connections process (timeliness) is the area of the process that customers experience the most frustration (see evidence in the output cases) • Performance will be measured by the average time (mean) of quotes from the moment the information is provided by the customer is entered (either over the phone or usually web) to the moment the quote figure is provided. The '3 days on site start' is measured from the

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				<p>day of the quote but will not count if a customer opts for a later day (of course).</p> <p>Targets of 15 mins and 3 days were discussed, and we demonstrate how these are stretching and compare very favourably with others in and out of the industry.</p>
What consumers want and value (Customer Service) / Our commitments	Explain and justify the CVP	<p>Cadent to explain why the 15-minute connection quotation is included in the CVP for GD-2. We understand that this is a vision you are working towards already and may achieve soon. What benefits will be delivered in GD-1 versus GD-2?</p> <p>Cadent to provide a breakdown of how the overall CVP of £292m for “improved customer service” (page 69) was derived.</p>	CEG, CEG(PTG)	<p>This was covered in our ‘deep dive’ session on the 5th November and is included in the detail of our 07.03.04 – improving our household connections service appendix case.</p> <p>Detailed cost breakdowns are provided for all output cases in Chapter 7, the individual output cases and in the CVP appendix – 07.01.00.</p>
What consumers want and value (Customer Service) / Our commitments	Vulnerability Strategy	Develop a consumer vulnerability strategy.	CEG(PTG)	Complete – see Appendix 07.03.00.
What consumers want and value (Customer Service) / Our commitments	Beyond RIIO-2	Provide a view beyond RIIO-2 / horizon scanning	CEG(PTG)	We believe that this feedback is in relation to the customer vulnerability strategy. Following an item in the challenge log, we undertook a PESTEL analysis to develop a wider (forward) view of the longer-term horizon. In the strategy document (Appendix 07.03.00), we have a section on ‘horizon scanning’ now that was not there before the challenge was raised.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				We have also included a 'horizon scanning' section in the ongoing Stakeholder Engagement Strategy which covers all output cases
What consumers want and value (Interruptions) / Our commitments	Clarify engagement on interruptions by customer segment	<p>Particularly given that the unplanned interruption targets are split out by households, major incidents and MOBs, and planned interruptions are presumable treated separately, we are unsure to what extent engagement took place on each of these areas of performance.</p> <p>Provide clarity on what engagement has taken place on planned interruptions and major incidents in particular, including what questions were put to participants and what information they were given around current performance and the cost of further improvement.</p> <p>Provide clarity on engagement with industrial and large commercial customers as well as generators and how they are affected by interruptions.</p>	CEG	<p>As explained during the quality experience 'deep dive' session on the 5th November, the key engagement that we did in relation to planned interruptions has been captured in our 'Minimising Disruption' output case (Appendix 07.03.08).</p> <p>The main feedback we have received is that the duration of the interruption is not an issue, but minimising disruptions caused through better roadwork information and working with other utilities is key.</p> <p>In addition, feedback led us to develop our Time Bound Appointments output case (Appendix 07.03.07) output case as customers who had experienced planned interruptions explained that establishing a more convenient and certain restoration process would be very useful – the output case explains the engagement on this. Appendix 07.03.01 (establishing and raising the bar) also captures input in relation to engagement on planned interruptions as does 07.03.05 (measuring and enhancing accessibility), which is about inclusivity and accessibility (and improvements to communications) – again, this covers planned interruptions.</p> <p>In each of these output cases, we have provided more clarity on I&C and other business customers explicitly.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
What consumers want and value (Interruptions) / Our commitments	Clarify commitments in relation to planned interruptions	<p>What commitments has Cadent made for improving the experience of planned interruption customers, or to what extent does the chapter speak to their experiences too?</p> <p>What consideration was given to different types of customers, and what plans for improvement does Cadent have for each of them? The CEG feel that industrial customers, large businesses and generators are not considered sufficiently.</p>	CEG	<p>This is challenge 207 from the challenge log, which we have proposed to be closed.</p> <p>Planned interruptions will be improved through the delivery of several output cases:</p> <ul style="list-style-type: none"> • Minimising disruption – better roadwork information and working with other utilities to minimise time in the road. • MOBs - There are additional improvements listed in the MOBs appendix (as some MOBs work is planned) and the inclusivity and accessibility output case. <p>Customer feedback tells us that the experience of planned interruptions could be better with clearer information (multiple channels, timeliness), certainty over reinstatement times, better communication during interruptions and time bound appointments for restoration of supply.</p>
What consumers want and value (Interruptions) / Our commitments	Close gaps in the optioneering of interruption targets	<p>The optioneering of the interruption targets has gaps in our view.</p> <ul style="list-style-type: none"> • Engagement with customers on the average interruption target has shown mixed results, with BOT testing showing no willingness to pay for improvements whereas the WTP survey showed the opposite. This may be partially due to Cadent changing the target levels that were tested mid-way. We are awaiting the results of the acceptability testing 		<p>This was discussed in our 'deep dive' session on the output cases on the 5th November.</p> <p>All of these points have been addressed in the new output case.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		<p>to be able to assess whether the 9-hour target is backed up by consumer engagement.</p> <ul style="list-style-type: none"> • Thus, Cadent has used its own past performance and customer research to inform its target. We are uncertain as to how GDN benchmarking data was used. The last benchmarking figures we saw were from 2017/18 and showed that Cadent performance was roughly in the middle of other GDNs on the number of unplanned interruptions and duration. • The appendix doesn't provide a clear view of current RIIO-1 performance in each area, per year - it only states the total average. • Cadent did calculate the costs for achieving various hours of interruption (and used this in its consumer research). We are not aware that Cadent produced a cost benefit analysis for various performance levels. <p>We are uncertain as to how Cadent developed the "targeted likely levels" of interruption. In principle, we do understand why the targets for the official interruption commitment would be more cautious given that a penalty can be incurred against them.</p>		
What consumers want and value (Interruptions) / Our commitments	Provide evidence in support of interruptions targets	Please clarify or mention in the Business Plan a) more detailed RIIO-1 performance on interruptions; b) how you have taken into account other GDN performance when drawing up interruption targets; c) whether you have conducted a cost benefit analysis for the various		This is all included in the revised output case – "getting our customers back on gas" (Appendix 07.03.06).

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		interruption targets; d) how the likely levels of interruption were derived. Include information on the optioneering work done on timed appointment commitment.		
What consumers want and value (Disruption) / Our commitments	Advertise what Cadent done in support of vulnerable customers	We know that Cadent has done a lot of work to make its sites safe and navigable for people with sight or mobility issues. This should be acknowledged.	CEG	We have now included this within the 'getting our people back on gas' output case (Appendix 07.03.06).
What consumers want and value (Disruption) / Our commitments	Justify street works proposals and explain approach to measurement	Provide updated information on the optioneering that was done for street works, and justify why the final proposal focuses on Type 1 roads. Clarify how "% provisions of roadworks information" will be measured.	CEG	This was raised in the output case 'deep dive' session and has subsequently been added to the output case.
What consumers want and value (Disruption) / Our commitments	Complete CVP calculation	Complete CVP calculation for road works information and street works collaboration.	CEG	We have explained in the CVP appendix (07.01.00) that whilst some proxy data exists to value disruption, we do not regard this as robust enough to build into our CVP. We did not undertake willingness to pay research on this to allow us to calculate a benefit in this manner. However, we have included this in our non-monetised CVP section (Appendix 07.01.00).
What consumers want and value (MOBs) / Our commitments	Confirm engagement on MOBs interruptions	We are not clear whether different target levels and their costs were put to MOBs customers, like they were for the average household interruption duration. Given the regional MOBs targets are wildly different (6 days in NW, 13 in EoE, 22 in Lon), we would have also expected more regional-based engagement.	CEG	See MOBs Appendix 09.04 – our engagement is captured in this document, along with Appendix 07.03.06 – getting our customers back on gas.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		Cadent to clarify what engagement took place on the MOB's interruption targets, in what regions, including what questions were put to participants and what information they were given around current performance and the cost of further improvement.		
What consumers want and value (MOBs) / Our commitments	Confirm engagement with business customers on MOB's interruptions	Provide assurance that business customers have been sufficiently considered in relation to MOB's interruptions.	CEG	This is explained in the MOB's output case (Appendix 09.04)
What consumers want and value (MOBs) / Our commitments	Develop an ongoing engagement strategy	Cadent to develop an engagement strategy for this important area. This should include articulation of its engagement aims in this area, how these link to its overarching MOB's strategy, and analysis of barriers and benefits for stakeholders to engaging with Cadent on MOB's.	CEG	This is included in Appendix 09.04 and summarised in our ongoing Stakeholder Engagement Strategy Appendix 05.01.
What consumers want and value (MOBs) / Our commitments	Reconsider the wording of the strategic objectives	<p>The CEG has further challenges pertaining to the MOB's strategy around:</p> <ul style="list-style-type: none"> • that Cadent could better factor in customer experience into their risk score calculations • incomplete horizon scanning of risks, opportunities and uncertainties relating to MOB's • the strategy for medium risers, which leaves customers in such buildings with a higher total population risk at the end of RIIO-2 compared to high risers. 	CEG	Since the 'deep dive' session on the 5 th November, the CEG and Cadent leads have been conversing regularly – this has been explained and now updated in the MOB's customer appendix – Appendix 09.04.

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		Reconsider the wording of the strategic objectives based on our September 2019 feedback.		
What consumers want and value (MOBs) / Our commitments	Justify targets	<p>Cadent to provide further data points to articulate that MOBs interruption targets are ambitious, including GDN benchmarking data if available, and historic performance on MOBs in each region against the forecasts.</p> <p>Cadent to explain how they derived targeted improvements across different measures.</p> <p>Cadent to explain why the using the median interruption duration is best for customers. We see the risk that this doesn't encourage the company to quickly fix any interruptions that are longer than the median duration.</p>	CEG	See the MOBs output case - Appendix 09.04.
What consumers want and value (MOBs) / Our commitments	Explain the activities and costs for properties service by a bank of meters	The activities and costs related to the new category of work associated with multiple occupancy buildings served by a bank of meters have not yet been explained by Cadent.	CEG	This was explained in the CEG meeting in October and has subsequently been explained further in Appendix 09.04.
What consumers want and value (MOBs) / Our commitments	Complete CVP calculation	Cadent to complete CVP calculations.	CEG	This is part of our non-monetised CVP set out in Appendix 07.01.00. Whilst we undertook willingness to pay on overall interruption times, the volume of MOBs customers interviewed / surveyed is strictly speaking not statistically robust. We have reflected this in the approach we have taken to determining CVP.

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What consumers want and value (MOBs) / Our commitments	Provide costs of the Energy Exchange programme	Cadent to respond to CEG questions around the costs of the Energy Exchange programme	CEG	The Energy Exchange programme is explained at length in the MOBs investment case - Appendix 09.04. This now addresses all of the questions raised by the CEG.
What consumers want and value (environment) / EAP	Link environmental output cases to the EAP	Output Cases to be made annexes to the EAP and a summary version of the EAP to be included in the main plan document	CEG deep dive	We have made this change and updated references accordingly. We will add a summary of the EAP to the main plan.
What consumers want and value (environment) / EAP	CVP value justifications	Check use of triangles for CVP in output chapter as covers both quantitative and qualitative so difficult to cross reference to the list of just quantitative measures in figure 07.02	CEG deep dive	This comment applies to the CVP appendix (Appendices 07.01.00) rather than to our EAP - we have reflected the feedback there.
What consumers want and value (environment) / EAP	Explain EV cost increases between plan versions	Explain increases from October plan at next CEG	CEG deep dive	Detail of increases were provided to the CEG. At a high level, there were four elements: <ul style="list-style-type: none"> We revised the deployment schedule for EVs, which resulted in lower opex savings We added back-up diesels to ensure operational resilience Our review of costs identified an error in costing of EV charging points We anticipated a reduced forecast unit cost for EVs over time
What consumers want and value (environment) / EAP	Cost information	Clear on breakdown of zero carbon cost actions	CEG deep dive	We have added a table taking setting out the transition from our baseline emissions to zero emissions by the end of RIIO-2 – see our EAP (Appendix 07.04.00) and Carbon Neutral Operations Output case (07.04.04).

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What consumers want and value (environment) / EAP	Engagement	Demonstrate ongoing engagement requirements and internal review and monitoring are covered in stakeholder engagement strategy	CEG deep dive	This is now covered in section 5.17 of the main plan We have added an 'enduring engagement' section to the EAP.
What consumers want and value (environment) / EAP	Understanding of overall footprint and priorities	Incorporate the diagram showing overall footprint and constituent parts, where evidence on plans in each are covered and the targets showing current performance and targets.	CEG deep dive	We have included both a diagram and a table breaking down footprint year by year. This is also included in the Carbon Neutral Operations Output case (Appendix 07.04.04).
What consumers want and value (environment) / EAP	ISO14001	Set out more clearly what ISO14001 management system provides in the EAP and what the list of current issues are and priorities from recent audits to set context for the plan.	CEG deep dive	We have provided the CEG with the latest 14001 audit report, showing there are no non conformities. We have noted this in our EAP (Appendix 07.04.00).
What consumers want and value (environment) / EAP	RiIO1 v RiIO2	Be clear what is being done already in RiIO1 and new actions in RiIO2	CEG deep dive	Throughout, we have included references to RiIO-1 performance. Chapter 7 now includes a comparison of RiIO-1 and RiIO-2 commitments
What consumers want and value (environment) / EAP	Reduce utility energy consumption	Show how we are taking the opportunity to improve our business carbon footprint through the proposed office move.	CEG deep dive	This change is a key enabler of the reduction in utility energy consumption included in our EAP. We have clarified that the office move is an enabler in the action
What consumers want and value (environment) / EAP	Reduce utility energy consumption	Show how employee commitments will help overall energy efficiency and any work being done through Community Fund	CEG deep dive	Employee commitments are covered in more detail in the output case (Appendix 07.04.07). We are attempting to encourage changes in employee behaviour, but this sits aside from 10% reduction target.
What consumers want and value (environment) / EAP	Procure 100% renewable energy	Show how we have considered the impact of the purchase of green gas and that it will not affect the wider market for biomethane. Puts this in proportion	CEG deep dive	The market for Biomethane is uncertain, although indications from suppliers are that our commitment is achievable. We have acknowledged the uncertainty in

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				EAP and said we will build up to this more slowly. We have added more detail explaining this is the case
What consumers want and value (environment) / EAP	Procure 100% renewable energy	Reflect the costs of own use gas more clearly in the output case	CEG deep dive	The cost of sourcing renewable gas has been split out in the output case. The output case acknowledges that the market may not be able to meet this level of demand at the start of RIIO-2, so we have built up to this slowly. We have provided an additional explanation of this.
What consumers want and value (environment) / EAP	Procure 100% renewable energy	Ideally source another gas price to benchmark green certified costs with another supplier	CEG deep dive	We have cross-checked our pricing assumption. We propose to obtain an up-to-date market price in 2020.
What consumers want and value (environment) / EAP	Reduction in business mileage	Set out business mileage target 12.5% reduction target and how this will be measured. Show how this has been accounted for in our cost forecasts	CEG deep dive	The target is now 15%. We do not expect any additional cost from business mileage reductions (The EAP explains this is driven by behavioural change, alternatives to travel and reducing the cap on permitted vehicles). We have explained how this will measure this output in the EAP - total business mileage, average vehicle emissions and emissions intensity.
What consumers want and value (environment) / EAP	Zero emissions first responder vehicles and electric charging	Demonstrate costs have been tested and challenged. Because this is the biggest cost element of the package, and also because this is a new area for Cadent to cost, more assurance is needed around this forecast	CEG deep dive	Unit costs of EVs are uncertain - but have been based on quotes acquired by our fleet team. We have internally challenged costs in terms of both accuracy of spreadsheet and reasonableness of assumptions. Additionally, PwC have reviewed the process we used to come to our cost estimates for

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				Carbon Neutral Operations. We discuss the general process for generating output costs in the appendix that introduces all the appendices for Chapter 7 (see Appendix 07.00.00)
What consumers want and value (environment) / EAP	Shrinkage	Articulate a range of outcomes on shrinkage reduction for the reputational incentive, not just the peak level. And explain reason for using a range.	CEG deep dive	We have added peak winter and seasonal normal scenarios to give a range. The EAP now explains there are two scenarios based on weather.
What consumers want and value (environment) / EAP	Shrinkage	Show more clearly why the pressures cannot go down any lower	CEG deep dive	If we go any lower, we will breach minimum requirements for consumer appliances and cause safety and reliability issues. NB we are financially incentivised to reduce this as much as we can, so already seek to do this subject to maintaining safety case. We have added this explanation to the EAP.
What consumers want and value (environment) / EAP	Theft of Gas	Consider whether we should be claiming CVP for theft of gas when there is a financial incentive attached to it	CEG deep dive	We have amended our CVP calculation to take account of only the incremental increase in recovery we expect under the new incentive compared to typical past performance.
What consumers want and value (environment) / EAP	Theft of Gas	Can you demonstrate that your activities do not impact on incentives for suppliers to investigate theft and roles are complementary and not in conflict	CEG deep dive	We have amended our output case to include an explanation of this. Roles are clearly defined by industry agreements. We do not anticipate any impact on supplier activities.
What consumers want and value (environment) / EAP	Offsetting	Explain the approach to offsetting clearly and make sure this is not the headline of the activity	CEG deep dive	We have added material to the EAP saying that Offsetting will be achieved through partnership with third parties and will exploit UK based certified or UN Gold Standard offset mechanisms. We have made clear that our first step is to reduce emissions and then

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				offset anything unavoidable. This is also included in the Carbon Neutral Operations output case (Appendix 07.04.04).
What consumers want and value (environment) / EAP	Offsetting	Can we show sensitivity analysis on future cost of carbon for offsetting? Consider how we explain that zero carbon is for our business operation excluding shrinkage so as not to appear disingenuous	CEG deep dive	Costs included are for certified offset schemes and we have taken the high end of the potential range of costs (due to Ofgem expecting UK-based offsets). Future changes to costs would affect this - but we do not expect this to be material to the plan (offsets total £0.7m across the 5 years) We have added 'non-shrinkage' throughout. We have reordered the EAP so that shrinkage is discussed before non-shrinkage.
What consumers want and value (environment) / EAP	Reduce the amount of avoidable waste sent to landfill	Be clearer on the scale of waste generated and that the plan is considering waste beyond carbon	CEG deep dive	The executive summary of the output case (Appendix 07.04.06) now includes the annual tonnage of waste generated for both business waste and spoil.
What consumers want and value (environment) / EAP	Reduce the amount of avoidable waste sent to landfill	Explain the diagram in the output case more clearly 06.01 and check figures	CEG deep dive	Title of the diagram has been updated to make it clearer what is shown. We added an explanation of why the diagram never reaches exactly zero.
What consumers want and value (environment) / EAP	Reduce the use of first time aggregate. Reduce the carbon intensity of pipes and fittings.	Highlight the work cadent doing to create less "spoil" i.e. lower environmental impact	CEG deep dive	We have added a line to the output case to describe new techniques we are using to reduce the level of spoil we generate (e.g. trenchless drilling, vacuum suction)

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What consumers want and value (environment) / EAP	Site environmental outcomes	Set out more clearly how water use is managed and measured (including water bath heaters and vehicle washing) any noise management	CEG deep dive	We have added a description of water use and included some figures on consumption in the EAP. However, we are not large users of water.
What consumers want and value (environment) / EAP	Site environmental outcomes	Set out more detail what sites we have and how our plans are being developed for different types, eg biomethane connection points, AGIs and depots etc	CEG deep dive	We do not prepare plans for 'types' of site but rather develop bespoke 'environmental baselines' for each site, which then lead to actions for environmental improvements. This has been added to the EAP. (NB we do not own biomethane connection points).
What consumers want and value (environment) / EAP	Site environmental outcomes	Be clear that gas holder sites are not now part of the portfolio	CEG deep dive	We have added a note that responsibility for these sites no longer sits with Cadent.
What consumers want and value (environment) / EAP	Site environmental outcomes	Can we point to any innovative biodiversity work on our small sites?	CEG deep dive	At this stage, we are building up a formal baseline of biodiversity information for each site and will develop actions to improve this through 2020. As such, we have not been able to include an example at this type of innovation at this point in time.
What consumers want and value (environment) / EAP	Scope 3 and supply chain	Clarity of where this is covered between part 1 and 2 and remove erroneous reference in part 3	CEG deep dive	We have put this all in part 1, in a specific section on scope 3 emissions
What consumers want and value (environment) / EAP	Reduce employee emissions	Be clearer around the target proposed (should we say 1000 tonnes per year?) and how it will be baselined and measured	CEG deep dive	The EAP now explains how we would go about calculating employee emissions changes. We don't think baselining would be able to fully capture community aspects of reductions. However, we can establish average reductions based on actions, and can have employees report these actions.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				The output case on our people's emissions has been aligned to new content in EAP
What consumers want and value (environment) / EAP	Chapter 6 (Net Zero pathways)	Set out Navigant work and show a timeline of Cadent projects and how they fit and at what point decisions will need to be made and how this links to any regulatory decisions or use of innovation mechanisms	CEG deep dive	Navigant work has been set out in the EAP including key pictures.
What consumers want and value (environment) / EAP	Chapter 6 (Net Zero pathways)	Rebalance such that there is more emphasis on the plans going forward than the story of how we have got to this point	CEG deep dive	Chapter 6 has an expanded section on the forward-looking timetable.
What consumers want and value (environment) / EAP	HyNet North West	Show the range of options that are being considered for how the project could be funded and delivered	CEG deep dive	We have added wording to the EAP giving a range of options for funding and the need for Government and Ofgem to set a direction of travel. (Options include Cadent funded to deliver, separately funded asset a la tideway tunnel. Could be funded by consumers or through taxation).
What consumers want and value (environment) / EAP	Modelling of different scenarios	Show what work is being done to develop the best solutions for different regions or to support policymakers. Include work with Imperial college and demand modelling being done.	CEG deep dive	Whole systems output cases and Chapter 6 now include a plan to work with regional stakeholders (including on decarbonisation) and regional whole system plans.
What consumers want and value (environment) / EAP	Modelling of different scenarios	Can you do more on assessing potential decommissioning outcomes	CEG deep dive	In developing whole system regional plans, if decommissioning is required we will include this there.
What consumers want and value (environment) / EAP	Entry enablement	Would like to see structure of unit cost revenue driver in the UM case	CEG deep dive	The Uncertainty Mechanism case has been updated in line with CEG feedback.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
What consumers want and value (environment) / EAP	Entry enablement	Be clearer on assumptions behind cost forecast and ranges of potential reinforcement and clear on what costs are assumed to be socialised	CEG deep dive	The calculation is described in the Uncertainty Mechanisms case
What consumers want and value (environment) / EAP	Off gas communities	Show that we will be considering energy efficiency alongside changing fuel source and that we will assess the other options open to the communities (i.e. we target ones where gas is the best option) Be clearer on what we expect to learn from the innovation project and ensure we have considered interaction with future development for the customers such as hydrogen readiness or alternative options	CEG deep dive	We have added wording on what we expect to learn - broadly it is to do with identifying the best solution for the communities, future-proofing and gaining a better understanding of whole life costs. Text from EAP also added to Output Case.
What consumers want and value (environment) / EAP	Off gas communities	Be clear on how many properties we are proposing	CEG deep dive	Numbers in the output case have now been clarified (we don't know what the number of connectees will be until the trial begins, but we know how many we will offer the option to).
What consumers want and value (environment) / EAP	Off gas communities	Clarify what we expect customers to fund in this project	CEG deep dive	Innovation funding will cover the network extension pilot. This is funded by all gas consumers not just Cadent customers. Costs for the support team are included in our plan and paid by our customers only.
What consumers want and value (trust) / Our commitments	Clarify commitments	Cadent to make their commitments clearer, eg on increasing participation by BAME, women and disabled. Baseline performance, clear targets and information on how this will be measured is missing.	CEG(PTG)	This point was addressed in correspondence with the CEG.
What consumers want and value	Stakeholder plan	It would be helpful to see the stakeholder plan include information on how Cadent will build relationships with	CEG(PTG)	This point was addressed in correspondence with the CEG.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
(trust) / Our commitments		expert external stakeholders who can help benchmark company performance (eg the Green Alliance).		
What consumers want and value (trust) / Our commitments	Plans for sharing information	Cadent's plans for more transparency of information need to be delivered in a way that is meaningful for customers (ie not just put on a website).	CEG(PTG)	This point was addressed in correspondence with the CEG.
Enabling whole system solutions / The future role of gas and a whole systems approach	Justify a common financial ODI on enhanced stakeholder engagement	The case for the proposed common financial ODI on enhanced stakeholder engagement has not been adequately justified in the draft plan or associated material.	CEG(PTG)	We have summarised the rationale for the proposed stakeholder engagement ODI in Chapter 6. We provide detailed arguments for why we consider our proposal is in the interests of customers in Appendix 07.03.02.
Enabling whole system solutions / The future role of gas and a whole systems approach	Address Ofgem's criteria	Cadent do not appear to have fully met the guidance on whole systems solutions.	CEG(PTG)	We discussed the CEG concerns through the 'deep dive' sessions. We addressed this feedback through the action list agreed in these sessions.
Enabling whole system solutions / The future role of gas and a whole systems approach	Provide a coherent description of engagement	<p>Engagement appears inconsistent. It would benefit from being placed in an overarching narrative.</p> <p>Engagement with some of these key stakeholders has not followed a formal process or been supported by engagement specialists.</p> <p>Options considered for inclusion in the business plan are not demonstrably linked to engagement and have been progressed with a very strong bias towards gas,</p>	CEG(PTG)	We have added an engagement summary section to Chapter 6. This sets out the landscape and puts our engagement into context. We have provided links to the ongoing stakeholder engagement strategy and explained how progress is being monitored internally through the Net Zero Strategy Group. Our Ongoing Stakeholder Engagement Strategy sets out our continued focus on this area (both externally and internally).

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		although this has become more vector agnostic as a result of CEG engagement.		
Enabling whole system solutions / The future role of gas and a whole systems approach	Broaden the scope of whole system thinking	Whole systems thinking is not well advanced in the areas beyond the scope boundary of facilitating the supply of energy – for example the potential impact that could arise from wide reaching deployment of building energy efficiency is not considered seriously as either an input to decision making or a contributor to whole systems solutions in the case of individual customers or communities. The scope of ‘whole systems thinking’ is hence still not quite as broad or innovative as we would have wished.	CEG	We have signposted and explained how Whole System Thinking sits across all of our output areas. We have provided additional narrative to explain how Whole System Thinking flows through plan.
Enabling whole system solutions / The future role of gas and a whole systems approach	Provide a link between proposed activities and costs	The costs associated with most WS/FRoG activities included in the plan are not fully set out or justified by CBA. Cross correlation of Whole Systems and Future of Gas initiatives/ commitments/ outputs and CVPs mentioned in various sections of the business plan is unclear making it impossible currently to gain a full understanding of the proposals, costs, CBAs.	CEG	We have revised the commitments chapter (Chapter 7) to provide summaries of cost, CVP and bill impact from all output commitments. We provided a clearer account of costs in Chapter 6. We did not complete CBA templates as this activity is not network related investment, in line with Ofgem’s guidelines.
Enabling whole system solutions / The future role of gas and a whole systems approach	Evidence benchmarking	In many cases no metrics, baseline or benchmark data is provided against which ambition can be judged and progress measured.	CEG	We have responded to this in the section on progress on joint system planning including the timetable around wider net zero aims.
Managing uncertainty / Our approach to	Provide more detailed information	We have had a positive discussion with the company about how to strengthen the UM cases to give a clear rationale for each UM including: <ul style="list-style-type: none"> • Specifying the risk faced more precisely; 	CEG, CEG(PTG)	We have substantially updated the format and content of our Uncertainty Mechanism Cases. These cases now provide the information and the evidence sought by the CEG.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
managing risk and uncertainty		<ul style="list-style-type: none"> Ensuring all risks are material Reassessing its view of the degree of control it has over specific issues which at present appears weighted towards an assumption that the company cannot control issues where we believe it has some degree of control or management ability; Giving further consideration to the design of the UM, its incentive effects and how any perverse incentives will be avoided; Giving more information of the operation of the UM including how it will be triggered and managed. <p>We would like to see evidence that each UM has been put through a thorough test against the process and criteria Cadent has set itself before the final version of the Business Plan is issued.</p>		
Managing uncertainty / Our approach to managing risk and uncertainty	Engage further on UMs	<p>The scale of the package of UMs is significant yet limited engagement has taken place.</p> <p>Observing some of the engagement that has taken place in recent weeks we are concerned that the discussion has been too generic and that the specific link between Cadent's identified areas of risk and customer service and costs is unclear. In addition, the values used are indicative so limited conclusions can be drawn from this.</p>	CEG, CEG(PTG)	<p>Reflecting this feedback we develop additional customer testing on Uncertainty Mechanisms in our the Acceptability Phase of our engagement strategy. We developed scenarios based on mortgages and other relatively easy to understand topics, to explain the concept of Uncertainty Mechanisms and through deliberative work with both informed and uninformed customers sought their feedback.</p> <p>The results are described in Chapter 10 – Managing Risk and Uncertainty.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		Demonstrate customer acceptance of the UM package.		
Managing uncertainty / Our approach to managing risk and uncertainty	Bill impact	Provide analysis of the bill impacts of the proposed UM package. The bill impact of this element of the BP has not been fully modelled. This work is now under way but it will happen too late to engage customers on its results.	CEG(PTG)	We have provided the bill impact in Chapter 10 of our plan and in the individual Uncertainty Mechanism cases.
Managing uncertainty / Our approach to managing risk and uncertainty	Set out why the overall package is in the interests of customers	We have asked Cadent to consider how its proposals strike a balance between perverse incentives to not plan strategically (particularly over the long term) and the ability to avoid the risk of outperformance (especially for major items such as reinforcements).	CEG	For individual risks, as set out in the appendices to Chapter 10, we set out how we have sought to minimise perverse incentives. Chapter 10 considers the Uncertainty Mechanisms in the round and sets our proposals in the context of whole system solutions.
Managing uncertainty / Our approach to managing risk and uncertainty	Set out why the overall package is in the interests of customers	We have asked Cadent to consider the potential unintended consequences of the approach from perspectives of customers / Cadent / Ofgem e.g. less delivered for customers or lower efficiency - and how does this play with what Ofgem wants and expects.	CEG	For individual risks, we set out how we have sought to minimise perverse incentives, as set out in the appendices to Chapter 10.
Managing uncertainty / Our approach to managing risk and uncertainty	Set out why the overall package is in the interests of customers	We have a general concern that if a material proportion of totex is within the scope of UMs, this could place an onus on the review of costs within the RIIO2 period in order to avoid customers being overcharged for work. Conversely, fear of a review process that disallows incurred costs may lead Cadent not to carry out work in the first place. CEG would like more clarity from the	CEG, CEG(PTG)	In part, as a response to this CEG challenge we have reappraised the full portfolio of Uncertainty Mechanisms and reduced the value of totex that is covered by their scope. The Mechanisms now lie within 6% – 13% of our totex. This is not an unusual level of uncertainty for a highly regulated company.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		company and from Ofgem on the way in which UMs will be managed in order to avoid these outcomes.		
Driving efficiency through innovation and competition / Innovation	Demonstrate engagement with emerging partners	There has been less engagement with emerging partners on potential for, or delivery of, external innovation.	CEG	<p>We are carrying out Innovation Laboratories to find new partners to support us in finding new technologies and ways of working.</p> <p>In addition, our work on whole system solutions requires us to work with DNO's and local authorities to establish requirements and then engage with the market to find suppliers to carry out the work. As this is emerging technology and thinking new partnerships are being established.</p>
Driving efficiency through innovation and competition / Innovation	Continually test the benefits of innovation to address the needs of customers in vulnerable situations	Although Cadent has a focus on innovation to address vulnerable customers directly, continuing engagement to assess the effect of other innovation on vulnerable customers is not set out.	CEG	<p>Our ongoing commitment to enhanced engagement is covered in detail in Chapter 5 (section 5.17) and in Appendix 05.01. The further engagement includes:</p> <ul style="list-style-type: none"> • Gathering BAU Insights through our Business Insights Team and investment in AI, machine learning and employee capability build • Establishing quarterly customer forums • Evolution of the Customer Insights Forum to become part of our performance management process • Evolution of Regional Stakeholder • Continuation of Cadent's Customer Engagement • Our online forum, • Stakeholder Engagement Incentive Scheme to support whole system solutions • Brand Awareness

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				<ul style="list-style-type: none"> Filling our expertise gap so our employees continually deliver value through ongoing engagement Stakeholder Engagement throughout our Plan and output commitments to ensure our strategy aligns with our innovation, MOBs and customer and customer vulnerability strategies. <p>Section 8.6 of the innovation chapter (Chapter 8) outlines some of the specific benefits to vulnerable customer groups we intend to action through innovation in RIIO-2. We will engage groups impacted through that work. Appendix 08.00 also includes a case study on innovation for the benefit of vulnerable customers and captures some of the engagement and partnering we've done to achieve success.</p>
Driving efficiency through innovation and competition / Innovation	Prioritise "whole systems" approaches	<p>It does not always prioritise 'whole systems' approaches as per Ofgem guidance. Note however, discussion at FIWG suggests that there are other points during work planning when consideration is given to whole systems, which could usefully be linked to the innovation strategy.</p> <p>Show that "whole systems" solutions are a standard part of the innovation process, either at an early stage (to broaden innovation, including potential competitive approaches) or as a counterfactual to ensure optioneering is comprehensive.</p>	CEG and CEG(PTG)	Our approach to 'whole system solutions' is integral to our innovation strategy and there is an innovation theme assigned to it. Details of this are outlined in the innovation chapter with more detail in the Whole System chapter (see section 8.6 of Chapter 6) and the Environmental Action Plan.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Driving efficiency through innovation and competition / Innovation	Make the delivery plan “real”	<p>There is little tracking on: who Cadent will report to; sharing of innovation; assurance of innovation (and managing risk in line with findings from customer and stakeholder engagement).</p> <p>It is not clear that Cadent has fully considered the business change required to deliver innovation faster.</p>	CEG	<p>Our approach for tracking innovation and increasing pace of deployment is outlined in the innovation chapter (Chapter 8) and associated appendix (Appendix 08.00), particularly the sections on our use of the ENAs new measurement framework for innovation. We have committed to use this framework going forwards in our plan and to continue to collaborate with other networks and the ENA on it’s development and evolution. This has been designed to increase transparency on the benefits of network innovation projects.</p> <p>Appendix 08.00 outlines our approach to the cycle of improvement and change. The scale of change is very significant, and the revised chapter and appendix seek to clarify our plan and that we recognise the significant journey ahead of us including to fully embed a culture of innovation. We have clarified our self-assessment of our ‘innovation culture’ and emphasise our understanding that there is a lot more work to be done in this regard.</p> <p>Pace of delivery is discussed in the chapter both as a lesson from RIIO-1. We have also explained that, in RIIO-2, our 28-customer facing operational units will be set up to compete in a manner that should accelerate innovation implementation.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Driving efficiency through innovation and competition / Innovation	Provide a better link to the Community fund	Cadent plans to use its Community fund to support innovation, but it is not clear what the scope of this activity will be or how it will be brought into Cadent's innovation process.	CEG	<p>Our approach to the Community Fund is outlined in Chapter 7.</p> <p>The precise distribution of funds will be informed by stakeholder consultation and the governance of the community fund. The scope of our very new community fund does extend to supporting innovative community improvement work, but at this stage the fine details are not all clear.</p>
Driving efficiency through innovation and competition / Innovation	Map funding sources	Map sources (eg InnovateUK) as well as NIA as a process for funding innovation and development to BAU.	CEG	As part of our explanation about how we propose that our plan should be funded, we have addressed the various funding sources that we believe are opportunities for Cadent (in the Innovation chapter). This covers the Ofgem mechanisms and other funds that can support our projects.
Driving efficiency through innovation and competition / Innovation	Demonstrate a resilient and flexible culture	<p>There is little to suggest Cadent is ready to respond to disruptive innovation, internal or external.</p> <p>It is not clear how well the company's process is able to be flexible (have a broad 'funnel' for ideas and cross-function innovation) or take a 'modern' approach - fast, iterative, using imperfect inputs (such as data) and accepting failures as part of the process - although Cadent has taken steps in this direction.</p> <p>The cultural change planned is ambitious within existing parameters, but not in terms of creating an agile company that is alert to, or able to take advantage of, ad hoc change.</p>	CEG	<p>We have looked to address this challenge throughout the innovation chapter (Chapter 8), but more specifically in section 8.6.4.</p> <p>We recognised that we need to balance the potentially conflicting requirements of ensuring we deliver value for money for the customer, whilst encouraging new innovative ideas into the business. Our approach to this is driven from aligning our innovation projects to our customer priorities (via the innovation themes), and by developing our depot centric model that puts decision making closer to the customer and asset.</p> <p>For disruptive innovation we are seeking to collaborate more openly through our innovation laboratories</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				<p>approach, whilst streamlining our internal processes using our 'change management framework' and 'perpetual experience toolkit'. This approach helps bring market ready innovation into the business and promote more rapid deployment to address issues facing our customers.</p> <p>Our depot centric model is designed to promote a more innovative, agile culture to by building capability at a regional level, by understanding and addressing the challenges facing our employees in delivering great service, and by breaking down the traditional organisation hierarchies.</p>
Driving efficiency through innovation and competition / Innovation	Demonstrate ambition by benchmarking	Cadent plans to benchmark its innovation performance. One of the reasons the status of this chapter is "red" s because benchmarking needs to be carried out to allow Cadent to assess its ambition level.	CEG and CEG(PTG)	<p>We have recently carried out a benchmarking process to measure the effectiveness of our innovation activity using the 'Innovation Measurement Framework' (IMF). We plan to build this into our BAU processes whilst also improving our effectiveness of measuring individual project benefits. This is now covered in the innovation chapter and section four of the new appendix. It should be noted that benchmarking ourselves against other network companies is very challenging because benchmarking is new and we are one of the first network businesses to measure ourselves using it. We have committed to continue to use the IMF through RIIO-2 and to work with other network businesses to develop the IMF and compare our performance and delivery against other companies through the period.</p>

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Driving efficiency through innovation and competition / Innovation	Justify innovation spend on leakage	Leakage reduction will be addressed largely through the IMMR programme and other mains replacement investment. Some innovation funding (of total NIA £3m) will be directed to this topic. While we support in principle the use of innovation funding in this area, the plan contains very little about what Cadent have in mind and what level of confidence they have in such ideas leading to significant further reductions in leakage. We are unclear how ambitious this target is. (Note comment originally contained in Environment report)	CEG	In our plan we will reduce leakage/ shrinkage by around 14% during RIIO-2, with some variations across the networks. As set out in the EAP the opportunity to control leakage via pressure control and the use of mono ethylene Glycol are already optimised through the good progress made in RIIO-1 and therefore the mains replacement programme is by far the most material way of addressing leakage further. There are some concepts at a low level of technology readiness that could drive further benefits – such as the capturing of gas released as part of controlled operations (instead of venting it as is the case across the industry today). The £3m included in this section of our plan is targeting benefits from connecting new sources of renewable gases, planning and engaging at regional levels for the energy transition and demonstrating pathways to net-zero. However, for all these 'whole systems' solutions it is envisaged that the majority of spend will be strategic innovation stimulus rather than NIA.
Driving efficiency through innovation and competition / Innovation	Show distributional impacts of innovation	Show how distributional impacts are considered within success criteria for all innovation.	CEG(PTG)	Whilst the costs of innovation will hit all bill payers, through the engaged we've done we have clarified that our customers are supportive of our engagement themes and the direction of engagement funds towards vulnerable customers, in particular, will generate outcomes that are consistent with this challenge about getting benefits distribution right.
Driving efficiency through innovation	Align chapter and appendix	Reconcile inconsistencies between appendix and chapter (eg in relation to research themes).	CEG(PTG)	We believe this has been achieved.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
and competition / Innovation				
Driving efficiency through innovation and competition / Competition	Explain insource / outsource decisions	<p>The principles which govern whether or not you decide to compete expenditure or to insource/outsource decisions are not clear. CEG has noted areas (for example surveys of MOBs) in which competition appears to have been discounted as an option where the rationale for this is not clear.</p> <p>We do not yet see a coherent strategic approach to competition and how that service the interests of customers or efficient delivery of your obligations. More clearly articulate choices relating to competition, their strategic rationale and potential benefits.</p>	CEG, CEG(PTG)	<p>The new appendix which summarises our Competition Action Plan provides much more detail on our approach to procurement, the choices we have made on insourcing and outsourcing, and the rationale for those choices.</p> <p>We have worked hard to assess our full programme of work to look for opportunities to increase competition. We have adopted a coherent framework for assessing these opportunities.</p>
Driving efficiency through innovation and competition / Competition	Address how you plan to increase competition	Cadent highlights that c70% of spend is subject to native competition and can explain how that figure is derived. Cadent recognises there is potential to increase that proportion and CEG encourages this noting Ofgem's expectation is that competition should be used for all procurements and projects, subject to cost benefit. This should be specifically addressed in your strategic approach.	CEG	Our full programme appraisal has specifically considered the opportunity to extend competition.
Driving efficiency through innovation and competition / Competition	Look for opportunities to extend native competition and justify	<p>Cadent should challenge itself to further extend the potential for use of native competition. It should more clearly articulate its choices relating to competition, their strategic rationale and potential benefits.</p> <p>More work is needed to explain and evidence why the approach suggested will deliver promised benefits, to</p>	CEG, CEG(PTG)	Our full programme appraisal has specifically considered the opportunity to extend competition.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
		evaluate it against Ofgem's expectations, and to estimate the outcomes for customers in terms of efficiency and service		
Driving efficiency through innovation and competition / Competition	Consider the full range of competitive options for HyNet	In relation to HyNet, we believe options for Cadent's potential role should be considered which go beyond the assumption that Cadent will own the network which will be regulated under RIIO arrangements as an integrated part of the existing network.	CEG	We agree. It is too early in the project to determine precisely what procurement process is in the interests of our customers, however, we are committed to exploring all feasible options.
Driving efficiency through innovation and competition / Competition	Demonstrate we have met Ofgem's requirements for competition	CEG has challenged Cadent to demonstrate more clearly in its plan how it has met Ofgem's requirements in relation to competition strategy.	CEG	We consider that our Competition Plan now does this.
Driving efficiency through innovation and competition / Competition	Engagement on competition	There is no specific mention in the plan of how engagement with customers and other stakeholders have or continue to shape Cadent's approach to competition. Clarity of what engagement has been undertaken on these matters and why, as well as the insight gained would be welcome. Explain how stakeholder engagement has influenced the plans or could in future.	CEG, CEG(PTG)	We adopt best practice in procurement, which can involve testing the market's appetite to supply different services before launching services.
Driving efficiency through innovation and competition / Competition	Justify new contracting approach	Set out an evaluation of initial trialling of depot-centric and new contracting approaches to give greater confidence over customer benefits and deliverability.	CEG(PTG)	We explain the trial of the new contracting approaches (Construction Services North West) in the Competition Appendix. We will keep the approach under review as we extend the trial to other areas of our network.
Driving efficiency through innovation	Consider how competition might	Consider more expansively how competition might benefit the delivery of the energy systems transition,	CEG(PTG)	It is too early in the project to determine precisely what procurement process is in the interests of our

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
and competition / Competition	benefit the energy systems transition	and in particular challenge its assumptions about ownership and regulation of the future hydrogen network and external benchmarks and the use of internal competition.		customers, however, we are committed to exploring all feasible options.
Cost and financial information / Cost and efficiency	Provide a detailed justification of costs	We have given Cadent significant feedback on making clear in the BP the underlying rationale for key investment proposals, including demonstrating it is needed, that alternative ways of delivering the objective have been considered, and that the risk of stranding has been taken into account.	CEG	We have provided additional detail within our investment cases and responded to the specific questions raised via the FIWG. All of our investment cases consider the base case (do nothing) and have been considered against the core scenario. Please see Appendices 09.00 – 09.36 for the detail.
Cost and financial information / Cost and efficiency	Update the core scenario	This chapter of the draft BP sets out how Cadent is using the Energy Network Association (ENA) core scenario to plan its costs. We have challenged Cadent on whether changes since these scenarios were prepared (e.g. the new Net Zero target for 2050) impact their plan. We accept Cadent’s analysis that impacts during RII02 have a marginal impact on cost.	CEG	The ENA’s core scenario and the way it underpins our plan is set out in Chapter 9. The ENA assumed four different end-states and the associated short-term changes. The ENA’s scenarios were already predicated on significant decarbonisation and we do not consider the announcement on Net Zero invalidates the ENA’s conclusions.
Cost and financial information / Affordability and financing our plan	Enhance financeability assessment to include qualitative factors.	The financeability assessment could be made more clearly, in particular, by better explaining how it considers the potential for qualitative factors to impact credit ratings. We note that while the potential credit rating effect of qualitative factors is explained, all credit rating analysis is based on “numerical only” assessment.	CEG	We provide narrative on why we focus on quantitative assessment and how we understand that rating agencies will interpret the quantitative data i.e. interplay between quantitative and qualitative measures in Chapter 11. We acknowledge that qualitative factors impact ratings and provide our assessment in Appendix 11.01. We comment on key financial metrics to focus attention on the KPIs that rating agencies prioritise. We note that Moody’s grid-implied rating is likely to be constrained to the rating indicated by the level of its preferred key

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
				metric – Adjusted Interest Coverage Ratio ('AICR'). Moody's has reconfirmed its ratio guidance for energy companies with a minimum AICR of 1.4x for a Baa1 rating (in its UK regulated electric and gas networks sector comments issued in May 2018). Commentary from the major UK rating agencies is provided in Appendix 11.01 in summary format.
Cost and financial information / Affordability and financing our plan	Further justify the position on depreciation and capitalisation rates	<p>We are unclear around the extent to which depreciation is a factor in the forecast reduction in bill levels and what this implies for the balance between existing and future consumers.</p> <p>We note the statement that “we don't believe now is the time to make any adjustment to asset lives”. But, without the analysis it is difficult for the reader to consider.</p>	CEG	<p>In Appendix 11.01, we provide analysis of the extent to which depreciation contributes to our income in RIIO-2. We compare this to the experience in RIIO-1.</p> <p>We provide analysis in the Appendix on the impact to customer bills from different levels of depreciation (different asset lives).</p> <p>We explain the reasons for our view that it is not appropriate to make adjustments to asset lives at this time.</p>
Cost and financial information / Affordability and financing our plan	Present the conclusions of the scenario analysis in the main plan	Cadent's conclusions from its scenario analysis is (covered in Appendix 11.00) could be drawn out more clearly in the main business plan.	CEG	We have made adjustments to our main narrative to comment on these conclusions more clearly.
Cost and financial information / Affordability and financing our plan	Affordability testing	Confirm that affordability testing was based on accurate bill projections.	CEG(PTG)	We have confirmed that this is the case, within an acceptable margin of sensitivity.

Ofgem requirement / Cadent Business Plan Chapter or Appendix (if different)	Key Themes	Comment	Source (CEG / CEG(PTG))	Response
Cost and financial information / Affordability and financing our plan	Distributional bill impacts and fuel poverty	Demonstrate evidence of distributional bill impacts. Demonstrate that Cadent understands the breadth and depth of fuel poverty within its regions, and set its approach within this context.	CEG(PTG)	Our vulnerability strategy draws on expert input and explains our understanding of fuel poverty in each of our regions. We set out in that strategy how we will address fuel poverty.
Cost and financial information / Affordability and financing our plan	Consider bills and affordability in the longer term (ie beyond RIIO-2)	We consider the issue of affordability should be considered more broadly, covering both distributional impacts between different categories of customers. We would expect to see much longer-term bill forecasts under a range of possible scenarios, in particular relating to the future role of gas. It is therefore of concern to us that the business plan contains no meaningful information about possible projections for bill levels after the end of RIIO-2 or any explanation of the company's longer-term strategy for affordability.	CEG	We have added commentary in Chapter 11 to cover intergenerational bill impacts looking into RIIO-3 and beyond. We also discuss the distributional impacts and acknowledge our role in the energy system and how this we can support a fair and cost reflective charging methodology. The way we have targeted specific support to vulnerable and fuel poor customers is covered in detail in our output commitments. In Appendix 11.00 Affordability, we provide additional commentary on the distribution of the allowed revenue to different consumer groups.
Cost and financial information / Affordability and financing our plan	Conduct further engagement	The plan contains little detail or evidence about Cadent's engagement with customers or stakeholders. Cadent should consider how it can better demonstrate evidence of engagement with customers and stakeholders in the plan and hence meet Ofgem's requirement.	CEG	We have included more detail on this in Appendix 11.01, including the specific engagement completed with stakeholders and customers.