



SGN

Your gas. Our network.

Response to Draft Determination: Section E: Managing uncertainty and the move to net zero

RIIO-GD2 Business Plan

4 September 2020

Positive impact

Safe and efficient

Shared net zero future



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Structure of the document

Our response to the draft determination is split over six sections for ease of reference:

Section A: Executive Summary and Introduction.

Section B: Embedding the customer voice. This covers embedding the consumer voice, the CEG, and Ofgem's three consumer facing output categories - meeting the needs of consumers, an environmentally sustainable network, and maintaining a safe and resilient network. This section also covers cross-sector, sector-specific and bespoke outputs, ODIs and the CVP.

Here you will find answers to the following consultation questions;

- Core Questions (Q1 to Q9)
- Gas Distribution Sector Questions (GDQ1 to GDQ25),
- SGN Questions (SGNQ1 to SGNQ7) and
- NARMs Questions (NARMQ1 to NARMQ4).

Section C: Ensuring efficient cost of service. This covers the efficiency expectations approach to cost assessment, normalisation, regressions analysis, technically assessed cost and the business plan incentive. In this section we also provide our views on how COVID should be accounted for in the GD2 plan.

Here you will find answers to the following consultation questions;

- Core Questions (Q10 to Q11) and
- Gas Distribution Sector Questions (GDQ26 to GDQ41).

Section D: Ensuring efficient financing. This covers allowed return to debt, return on equity, the weighted average cost of capital and other finance issues such as tax.

Here you will find answers to all of the Finance consultation questions (FQ1 to Fq38).

Section E: Managing uncertainty and the move to net zero. This covers both cross sector, sector specific and bespoke uncertainty mechanisms, the approach to innovation and the move to net zero.

Here you will find answers to the following consultation questions;

- Core Questions (Q12 to Q33),
- Gas Distribution Sector Questions (GDQ42 to GDQ53) and
- SGN Questions (SGNQ8).

Section F: Totex incentive mechanism, process concerns, interlinkages and appeals.

Here you will find answers to the following consultation questions;

- Core Questions (Q34 to Q43)
- SGN Questions (SGNQ9)

These sections incorporate our responses to the questions set out in the draft determination appendices. Responses are denoted by: 'Q' for questions from the core document; 'GDQ' for questions from the gas distribution annex; 'FQ' for questions from the Finance annex; 'NARMQ' for questions from the NARMs Annex, and 'SGNQ' for questions from the SGN Annex.

For each substantive point we have then applied the following nomenclature;

Type 1. Factual or computational errors.

Type 2. Inconsistencies in stated approach or in the application of a methodology.

Type 3. Disagreement as to how the methodology should be applied.

Type 4. New evidence presented to respond to a point.

Type 5. Evidence that SGN has provided but hasn't been taken into account or given sufficient weight or given sufficient weight (i.e. SQs responses etc).

Type 6. Broad agreement with position put forward in draft determination.

Where substantial new evidence is provided, or there is a high level of confidentiality associated with the information provided, we have included this as an appendix and referenced it.

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Section E: Managing uncertainty and the move to net zero.

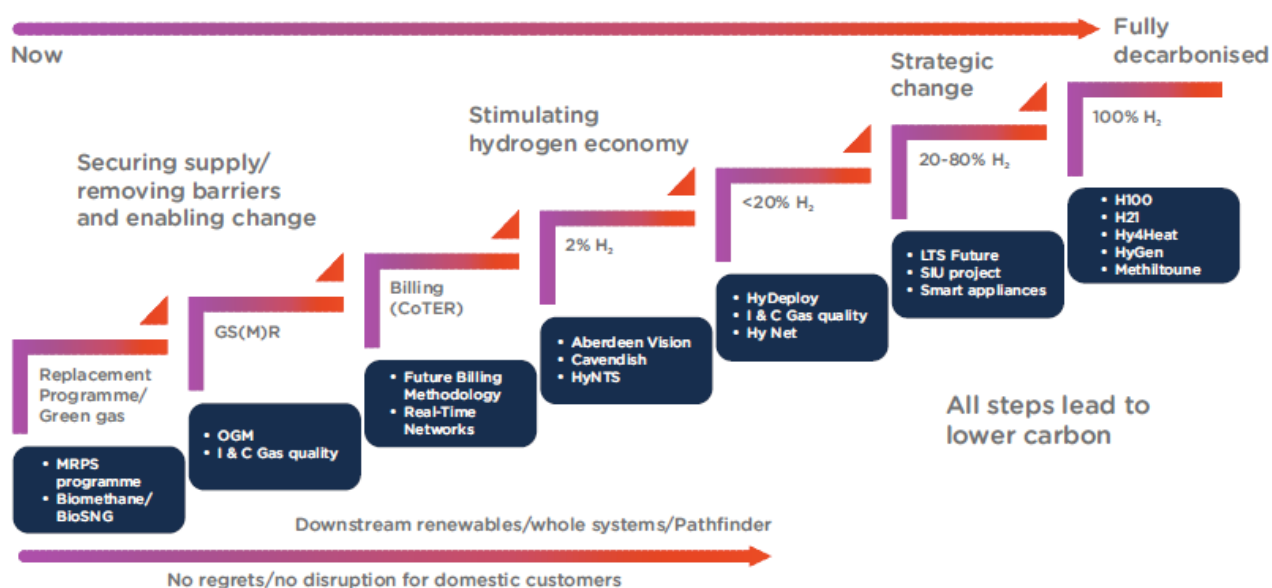
We understand and support the broad approach to uncertainty mechanisms that have been taken in the Draft Determination particularly when considering areas where major changes may fundamentally impact the investment prospects for a sector, such as decarbonisation.

We recognised this in our business plan and put forward a number of uncertainty mechanisms that we considered to be in customer interests that covered decarbonisation pathways, the environmental action plan, cyber and investment in assets.

Decarbonisation pathways

We have put forward a fully costed suite of projects that we identified as necessary steps to provide the information necessary to make an informed political choice regarding the prospects for decarbonising heat through the provision of hydrogen. This was underpinned by the decarbonisation pathway⁵⁸¹, setting out how the first three steps addressed securing the gas supply, the next three steps to stimulate the hydrogen economy and to implanting strategic projects to blend hydrogen, and the final stages focussing on strategic change to fully decarbonise heat with 100% hydrogen.

Hydrogen Decarbonisation pathway



The pathway identified the scale of the projects requiring funding through a reopener mechanism to enable their deployment. On this basis we support both the strategic innovation fund and the net zero reopener.

With the Strategic Innovation Fund (SIF), we think it important that the structure of the SIF is flexible and adaptable to the different types of projects and the benefits to be realised through joint funding opportunities. There is a risk that an inflexible structure becomes a barrier to the rapid progression of projects. To support the development of an appropriate governance structure we have provided examples of projects⁵⁸² we anticipate should be eligible for the SIF. Further examples are available within the business plan appendix we submitted in December⁵⁸³.

This stretching programme was supplemented by an ambitious programme of innovation to be completed through NIA funding. This is an important stage of research and development that plays a critical role in de-risking projects that will

⁵⁸¹ SGN Business Plan, Dec 2019, section 13.4.4, pg 135

⁵⁸² Energy2 System Transition Funding Mechanism Examples

⁵⁸³ Appendix-006-SGN Energy System Transition, Annex 8, GD2 Pathways Projects, Annex, (Pages 44 to 62)

later be presented through to the SIF. We are disappointed that the scale of ambition that we presented in the business plan was not recognised. This ambition reflects the scale and ambition necessary to rapidly demonstrate the viability of hydrogen as an energy vector and hydrogen's role in decarbonising heat. Rather, our funding requirements were assessed according to the level of investment in innovation delivered in GD1, a level that does not reflect the changing focus and urgency necessary to support net zero.

The customer and stakeholder engagement we undertook continually demonstrated that this was one of the most important areas for us to focus on.⁵⁸⁴ We presented an ambitious plan aligned with customer feedback which we tested with customers and informed stakeholder groups.⁵⁸⁵ In the light of this we ask that the funding levels are reconsidered and allowed on the basis of the information presented in the business plan and the ambition demonstrated.

This innovation was supported by an extensive BAU innovation, built on a culture of innovation established during GD1. We have clarified some of the concerns raised in the draft determination.

Environmental Action plan

In the draft determination we felt that more could have been made of the uncertainty mechanisms such as use-it or lose-it mechanism, which when combined with strong governance from the CEG or similar stakeholder based panel, can provide an effective and agile method through which to manage an uncertainty without incurring the administrative burden and bluntness of a reopener mechanism.

We think without such structures, the plan will be less flexible and less responsive to changing consumer expectations, changing technologies and associated changes in cost. We think that this is particularly important when considering the expenditure on ULEVs and zero emission vehicles (hydrogen and fully electric). Again, in response to customer and stakeholder feedback we adopted ambitious targets, which could only be delivered assuming a level of technological progress over the coming years⁵⁸⁶. Recent feedback from local authorities⁵⁸⁷ correctly identified that we were probably mistakenly assuming that we were passive recipients of technology rather than actively supporting and encouraging the development of new technologies. This is the type of challenge that we welcome and think the that environmental steering group would provide a useful conduit as part of a broader governance structure around the use-it or lose-it mechanism.

Cyber and non-operational IT

As we set out in [section 7.2.3](#), whilst we are supportive of the need for reopeners in both the cyber (IT and OT) and the data digitisation areas we remain concerned about both the risk of administrative burden that could be imposed on networks and the importance of clear guidance on the information that should be provided in these reopeners.

We provided substantially more information than other networks in our business plan and as such we are disappointed that an ex ante allowance was not provided for. We accept that it is important to have a much greater level of information to support each reopener, but we need clarity on the information that Ofgem requires to justify necessary investment during that reopener process.

We are also concerned about the reporting requirements through each of these reopeners. Whilst we recognise the importance of good communication at a time of substantial change and as we improve our common understanding of the main risks and potential solutions, it is also important that reporting expectations remain relevant and provide information that is valuable in guiding decisions. There is a risk that extensive reporting requirements fixed into licence becomes an administrative burden with limited additional value provided. As such we propose a more flexible approach to reporting, where the extensiveness of reporting requirements is subject to the performance of the network and the level of risk exposure that the investment needs to close.

Investment in assets

⁵⁸⁴ Stage 1: Explorative Qualitative Workshops and interviews (Exploratory Phase) (ref 002), Stage 3: Conjoint & WtP Summary report (Valuation Phase) (ref 005), Specialist panel: Future of heat, Edinburgh 1 (ref 023), Specialist panel: Future of heat, Edinburgh 2 (ref 024), SGN Stakeholder Satisfaction Wave 1 (ref 071), Stakeholder Satisfaction Wave 4 (ref 074), Large Gas User survey results 2019 (ref 076), Listening to Local Authorities (ref 086), Stakeholder Satisfaction Changing Priorities 2020 (ref 110)

⁵⁸⁵ Business Plan Acceptability Testing Phase 2 (ref 079), Post-COVID19 Business Plan Acceptability Testing (ref 109), Shared Net Zero Future round table event - Scotland (ref 090)

⁵⁸⁶ For example the vans that we currently operate and the weight requirements currently mean there are no suitable alternatives on the market. During RII0-GD2 we anticipate that this will change.

⁵⁸⁷ Meeting with the GLA 19th Aug 2020; comparison was made with approach to developing bus technology, and whether infrastructure providers could establish a similar consortium to support rapid market change.

Whilst we agree with many of the uncertainty mechanism put forward to govern investment in assets, we are strongly of the view that two proposed bespoke uncertainty mechanisms – ‘environmental resilience’ and ‘process safety’ set out in the business plan and rejected in the draft determination are important areas of expenditure, and that if the uncertainty mechanism as set out in our plan is not accepted then an appropriate ex-ante allowance should be provided for.

We also set out our concerns regarding the common design parameters for reopeners, in particular, the level at which the materiality threshold is set and the timing of the reopener windows. With the materiality threshold, the scale at which the reopener is set risks invalidating many of the reopeners on the basis that the materiality threshold of £20m is unlikely to be achieved with confidence at the time of the reopener window and may rule out many of the reopeners we proposed in our business plan⁵⁸⁸ by default. **We consider think that a reopener threshold of 0.5% (ie £10m) is more appropriate given how tightly controlled the price control is through ex-ante adjustments and extreme cost reduction challenges.** We comment on this in the specific reopeners where a materiality threshold is applied.

Similarly, we disagree with the materiality threshold of the combine reopener being set at 3% (£60m). This is a material amount before a reopener can be applied for is likely to risk a wider application to disapply the price control before such a reopener can be delivered. **The combined reopener should be set much closer to the individual re-opener – a level of 1% (ie £20m) would be more appropriate.**

With such a high threshold, there is a risk that investment decisions that could be covered by the reopener will be postponed until there is greater confidence that the reopener threshold can be achieved, and there may be a worse customer outcome as result.

In terms of the timing of the re-opener, we think that it is **important to delay the reopener window by one year**, so that those that have a reopener in January 2022 are postponed by a further year to 2023 to enable a further year’s collation of data before the reopener window is triggered and to have greater confidence on whether or not the materiality threshold will be met. Given preparation for the reopener is likely to take at least six months, any reopener in January 2022 would require a clear assessment that the materiality threshold will be achieved in July 2021, three months after final determination. We think that an option for submission in 2024 should also be available but we acknowledge this could start to overlap with the GD3 business planning process, with determination on the reopener towards the end of 2024.

7 Managing uncertainty

7.1.1 Common design parameters

- **Q 12. Do you agree with our proposed common approach for re-openers?**

Uncertainty mechanisms should include use-it or lose-it mechanisms and this should incorporate CEG governance.

We agree that uncertainty mechanisms, when used appropriately, are an effective tool in creating the right balance of risk between network companies and consumers. Whilst we agree with Ofgem’s overall approach to uncertainty, we note that design parameters were limited to volume drivers, reopeners, pass-through and indexation. We think that the exclusion of use-it or lose-it mechanisms missed an opportunity to reduce administrative costs and to give customer lead groups the opportunity to provide an effective governance in the consumers’ interest.

The choice of uncertainty mechanisms should correspond to the risk being considered. Within our business plan, if the risk was primarily around delivery and was high cost-confidence we proposed a volume driver – eg new connections and <2bar reinforcement. If the risk was primarily one of cost uncertainty then we proposed a use-it or lose-it mechanism and appropriate governance arrangements. It was only in situations where there was significant cost *and* significant volume uncertainty that consider a reopener to be the preferred option.

We tested different mechanisms with our customers. Our customers agreed⁵⁸⁹ that fixed budgets should be used for “business as usual” activities and liked the idea of ring-fenced funding through a use-it or lose-it mechanism as long as we could put in place governance structures to demonstrate efficiency. This is the approach that we put forward using the stakeholder-lead groups to provide governance and oversight functionality, and this is the approach that has been used in the ‘Consumer Vulnerability and CO allowance’, NIA, and is proposed for the Cyber IT and OT reopener.

⁵⁸⁸ SGN Business plan, Dec 2109, chpt 12, table 12-1

⁵⁸⁹ SGN Business plan, Dec 2109, chpt 12 and Shaping the Business Plan Qualitative Workshops - Sharing Financial Risk. Innovation Investment (ref 083)

Type 3 - Disagreement as to how the methodology should be applied. We think that there is a valuable role for CEG to support agile regulation through the governance of use-it or lose-it mechanisms.

Where possible early stage reopeners should be provided as an ex ante allowance

Secondly, where a reopener has been proposed, it is our view that this should be to manage a true point of uncertainty and that there should be clarity on the expectations of the evaluating team. We are concerned that some of the uncertainty mechanisms proposed for the very early stage reopeners may be necessary because the information that was provided in the business plan was insufficient, rather than due to a genuine uncertainty.

In our business plan we provided substantially more granular detail than any of the other GDNs. If that level of granularity was appropriate, then Ofgem should not feel compelled to apply a 'one-size-fits-all' policy and should provide appropriate ex-ante funding. This will help to avoid the administrative cost of resubmission. If that information was inappropriate or insufficient, then we stress the need for much greater clarity regarding the information expectations. It is important that the expectations of the assessment team should be set out as clearly as possible at least six months in advance of the reopener window to enable the collation of the appropriate information.

Where there is an early stage reopener it is also important to consider the position of these reopeners, should the start of the price control be delayed due to COVID-19⁵⁹⁰, or should the licence be modified due to an appeal. Either of these events could restrict the operability of the early stage reopeners and it is important that Ofgem clarify how they would operate in such instances.

Type 3 - Disagreement as to how the methodology should be applied. We think that under a number of areas, IT in particular, we have provided sufficient information for an ex ante allowance to be awarded.

Reopeners add significantly to the regulatory burden and need to be resourced appropriately by Ofgem

Given the number of reopeners being proposed, it is important that this process for assessing the reopeners is well resourced and that the process undertaken should follow a standardised and clearly set timeline allowing network companies to plan and manage resource appropriately. This should start with the provision of clear guidance on the information that will be required and the standards against which assessment will take place.

This is important as inadequate resource or a poorly defined process will increase the risk of delayed or poor-quality decision making, which may deter necessary investment from progressing in a timely manner.

Clear guidance needs to be provided in advance of re-opener application windows

It is therefore very important that if there is a defined reopener window there is clarity of information that is required. The scope and eligibility needs to be clearly understood as soon as possible and set out in guidance at the outset of the price control. The detailed reporting templates should be provided at least six months in advance of the reopener window and a defined process issued in the run up to the reopener so that questions and clarifications can be resolved. We believe that uniformity and consistency in the approach and the evidence base will support greater clarity in the sums requested and greater clarity across network companies. We think this is important to ensure consistency in the evidence base and that these expectations should be set out clearly in advance and discussed through appropriate work groups to support the collection of relevant and valuable information.

Having clarity of the information requirements is important: this is particularly the case if a reopener could be rejected where it includes incomplete information⁵⁹¹. From the business plan submission, we have provided significantly more detailed information than other networks. If this level or depth of information was insufficient then we need to have more guidance as to what information is necessary. Our experience from the business plan process to date is that in certain areas which are currently covered by uncertainty mechanisms, we considered the detailed information provided was sufficiently certain to set an appropriate ex-ante allowance to be defined. Whilst we accept that Ofgem may have required additional or different information, the difference in expectations clearly demonstrates the need to have the clear guidance and requirements set out in advance.

⁵⁹⁰ Open Letter, Contingency Plans for RIIO-2, 14th July https://www.ofgem.gov.uk/system/files/docs/2020/07/riio-2_contingency_consultation_letter_2.pdf

⁵⁹¹ RIIO-2 Draft Determinations, para 7.20, pg 61

Where there is less clarity on the standards ultimately required, for example decarbonisation, it is important that the information requirements remain appropriate to the funding request that is being made. More flexibility may be required in order to accommodate each project appropriately rather than defining the project by the information requirements of the reopener mechanism.

Type 3 - Disagreement as to how the methodology should be applied. Eligibility should be clearly set at the start of the price control and detailed guidance issued no later than six months before the reopener window closing.

Information requirements need to be appropriate to investment scale and timeline.

Finally, we note Ofgem's objective is to have robust decision in line with the annual iteration process in November. Given that this provides for a ten month window between submission and decision, we would encourage a more compressed timeline for letting companies know as to whether they have been successful so that investment can take place in a timely manner.

Following the business plan submission, a regular point of discussion with Ofgem's cyber resilience team⁵⁹² was the usefulness or not of a project plan. Clearly a longer time period between submission and securing funds will reduce the confidence around those project plan timelines, particularly where these depend on long-lead items.

It is therefore important that the information requirements should include clear thresholds for both the type of information that is required and for the time in which that investment occurs. In the business plan process, we may have taken a different approach to the EJPs and CBAs if we had been informed earlier than August⁵⁹³ that the expected threshold for projects was over £2m and for programmes was over £5m. Having this clarity early is important to ensure that Ofgem has the information required in the necessary form and to reduce the administrative burden of the reopeners.

Type 3 - Disagreement as to how the methodology should be applied. Timelines need to be compressed to enable investment to be undertaken in a timely manner.

Authority triggered re-opener should have the same design parameters as network reopeners

As it is written,⁵⁹⁴ the proposal appears to give Ofgem the unfettered and unilateral right to reopen the price control at any point in time, a level of intervention that we think is inappropriate and will materially increase the perceived risk of investing in the sector. As it stands, we are not aware of a compelling case why the rights of the Authority and the Network company should differ so significantly.

For timing, the network companies should still be anticipated to submit information in the same network to either secure more or reduce their allowances, and networks companies should be given guidance as to the type of information to be submitted at least six months ahead of any submission.

For thresholds, we do not see any reason why the thresholds applied to Ofgem's decision to trigger a reopener should be any different to those of the network company.

Regarding timing, where an uncertainty mechanism is linked to a government policy or substantive piece of evidence then it is appropriate that there should be a greater level of flexibility in the timing of any uncertainty mechanism, however this timing should be reciprocated across networks and Ofgem.

Finally, where the authority requests information⁵⁹⁵ we would strongly encourage a collaborative approach to gathering relevant data that is accessible. We find that the most effective data requests are those which begin with a good dialogue to clarify the requirements in a targeted manner; we are aware of instances where broad and ill-defined data requests can appear to take an unduly scatter-gun approach asking for a significant volume of data to identify something potentially helpful.

⁵⁹² Meetings with the Cyber Resilience team in February, April and May 2020

⁵⁹³ Ofgem working group, GD2 Asset Management WG2 (previously CBA/NARM/Repex WG), 7th August 2019

⁵⁹⁴ RIIIO-2 Draft Determinations, para 7.25, pg 62

⁵⁹⁵ RIIIO-2 Draft Determinations, para 7.25, pg 62

Type 3 - Disagreement as to how the methodology should be applied. Authority triggered reopeners should have the same materiality thresholds as the network triggered reopeners.

Materiality threshold poses significant risks to efficient cost recovery, the materiality thresholds should be set at 0.5% for the common design parameters and 1% for the combined reopener respectively to avoid placing undue risk on network companies or hindering better customer outcomes.

As it is proposed, the materiality threshold is at a level that places a significant risk on network companies and is inappropriate given the volume of reopeners, their materiality coupled with the shorter price control periods and the reduction in sharing factors compared to RIIO-1. This results in a significant risk that expenditure will not be recovered appropriately.

Under the current formula with the application of totex incentive mechanism and a 1% threshold⁵⁹⁶, for SGN there needs to be evidence that total expenditure will exceed £20m in order to trigger the reopener mechanism, or 2% of allowances. This is a very high bar and in effect excludes many uncertainty mechanisms from scope. In our business plan. We provided our best estimate as to potential expenditure over the course of GD2⁵⁹⁷ and only a few of the uncertainty mechanism that we put forward would be forecast to exceed this threshold. This high bar risks leading to a detrimental consumer outcome if investment is deferred until there is confidence that the threshold can be reached and is withheld past a reopener window.

There is a similar concern regarding the threshold for the aggregate process, which at 3% would require a threshold of £60m to be achieved.

Given how tightly defined the price control package is with adjustment mechanisms, exceedingly high cost cutting challenges and the number of reopeners that are in place, it is important that the threshold does not become a barrier to investment or delivering the best customer outcome.

On this basis a 0.5% reopener threshold for the common design parameters and 1% for the aggregate reopener would provide a more appropriate balance of risk and ensure a more accurate calibration of the price control, whilst not obstructing beneficial customer outcomes.

Type 2: Inconsistencies in stated approach or in the application of a methodology. The materiality threshold is set at a level that it is unlikely to be triggered and invalidates the structure of the uncertainty mechanism.

7.2 Cross sector uncertainty mechanisms

7.2.1 Coordinated adjustment mechanism (CAM) re-opener

- **Q13. Do you agree with our proposals on a materiality threshold, a financial incentive, a 'foreseeable' criterion, and who should trigger and make the application?**

It is our view that the practical barriers to submitting a proposal under the CAM are such that it is unlikely to happen without a strong incentive for networks to think creatively about their projects.

We broadly agree with Ofgem's proposal to not include a 'foreseeable' criterion, as it would add an additional burden of proof in the application process for little gain. We agree in principle that applications should come from a single licensee but must include a statement of agreement between the licensee who was originally assigned the responsibility and associated revenues for the output or project and the licensee who is able to deliver it with greater benefits to consumers. We also agree that only network companies should be able to trigger the CAM.

We are concerned however that there is a lack of financial incentive and believe that this should be incentivised. It is important to recognise that there will be significant administrative costs associated with any option design or transfer. The administrative costs will arise from engagement with the other networks, the senior management time, the legal costs associated with the transfer of risk and the programme risk of another network incorporating a new output into an

⁵⁹⁶ RIIO-2 Draft Determinations, para 7.31, pg 62

⁵⁹⁷ SGN business plan, Dec 2019, chapter 12 pg 118

existing price control structure. There will also be a writing-off of costs on any work that has already been undertaken (in project design, planning etc) that will no longer be required.

We believe that these costs need to be recognised and networks require to be made whole for co-ordination with other networks. We have set out a strategy to support this in our Whole Systems appendix within our business plan⁵⁹⁸. In our view, there is likely to be a fixed component to these costs (resources) that should be recognised for both parties, and incentives to change business practices should be in place. Aside from the fixed cost component, it may be appropriate for a tiered structure where value below a threshold is shared between network companies (recognising that there will be a consumer benefit through the sharing factor), and above a threshold are shared between network companies and the consumer.

We think there is a significant opportunity to research and develop a whole systems strategy as outlined in our Whole Systems chapter within our business plan. We propose to undertake this under the NIA allowance, in line with the themes identified⁵⁹⁹. Thus, we see an opportunity to evolve the CAM throughout the price control, from its initial narrow definition to a wider one.

Type 3: Disagreement as to how the methodology should be applied. We believe that costs need to be recognised and action needs to be appropriately incentivised.

- **Q14. Do you consider that two application windows, or annual application windows, are more appropriate, and should these be in January or May?**

We would support not applying time bounds to the reopener window as projects will be challenging without creating additional execution risks: a specific application window will either focus minds or the delay will end the project. We suspect it will be the latter in most instances.

We would strongly support the annual application window, and in principle would question whether a reopener window should be used at all, or whether it should be open to projects at any point in the price control period. This is because the timing associated with project transfers is critical, as any extended period of uncertainty will erode any costs savings potential and increases the risk that the project is not deliverable by the recipient party in the timescales required.

If we consider taking on a project in year two of the GD2 price control, which may require significant infrastructure, then there is a short three year window in which to design, secure appropriate permission, and deliver the project for the end of the GD2. For a large project this would be very challenging and a high-risk commitment. As such it is likely that by implementing these windows, delivery would in fact be delayed to the following price control period.

If the reopener windows are to remain in place, then Ofgem will need to introduce a structure through which network companies can gain confidence that a project is going to be considered eligible, and the values at which it will be transferred considered appropriate needs to be put in place prior to any reopener window. This will be a necessary component and is important in order to test the mechanism design for the types of projects identified.

Type 3 - Disagreement as to how the methodology should be applied. We would look to minimise barriers to application where-ever possible.

- **Q15. Do you consider that the RIIO-1 electricity distribution licences should be amended to include the CAM, or wait until in 2023 at the start of their next price control?**

If SGN is unable to use the CAM with an electricity distribution network until 2023, this significantly reduces the timeframe in which the two networks will be able to successfully develop suitable projects. However, we recognise the additional research and development needs in this area⁶⁰⁰.

⁵⁹⁸ Appendix 007 – SGN – Energy Futures Whole Systems – December 2019 – Pages 25 to 30, section 4 (enabling whole systems)

⁵⁹⁹ Appendix 007 – SGN – Energy Futures Whole Systems – December 2019 – Pages 19 to 24, section 3 (whole systems projects)

⁵ SGN H100 Fife NIC ISP Final – April 2020 - https://www.ofgem.gov.uk/system/files/docs/2020/05/sgn_h100_fife_nic_isp_final_06.04.20.pdf, Full NIC H100 Fife bid submitted by SGN 31st July 2020

⁶⁰⁰ Appendix 007 – SGN – Energy Futures Whole Systems – December 2019 – Pages 15 to 18, section 2 (breaking down system boundaries)

7.2.2 Cyber resilience operational technology and cyber resilience information technology

- Q16. Do you agree with our proposed re-opener windows for cyber resilience OT and IT, and our proposal to require all licensees to provide an updated Cyber Resilience OT and IT Plan at the beginning of RIIO-2?

Redacted

Redacted

Redacted

Redacted

- **Q17. What are your views on including the delivery of outputs such as: CAF outcome *improvement*; risk reduction; and cyber maturity improvement, along with projects-specific outputs?**

Redacted

Redacted

7.2.3 Non-operational IT and telecoms re-opener

- **Q.18 Do you agree with our proposal for the Non-operational IT and Telecoms capex re-opener?**

We support the reopener, but disagree that it should be focused on non-operational costs. This risks distorting investment and undervaluing the importance of highly skilled / high quality enabling individuals.

We agree with this proposal in principle however we consider the exclusive focus on capital expenditure to be inappropriate; and it should not detract from the need to set an ex-ante allowance that covers known and readily identifiable IT and telecoms costs in the final determination.

It is our understanding from the title of the uncertainty reopener, ‘**non-operational** IT and telcoms capex reopener’ that this is not expected to apply to operational IT expenditure. This may be a point of confusion in terminology, but it is very important to clarify whether operational IT is intended to be limited to network assets or whether it applies to any operational component of the business. If it is the latter, then we do not think that this is consistent with the approach to cost assessment that has been undertaken in technical assessment of SGN’s IT costs⁶⁰⁷ where the decision on whether to propose a cost base for a reopener or to provide an ex-ante allowance appeared to be based on the maturity of the programme presented and included operational and non-operational expenditure.

⁶⁰⁷ RIIO-2 SGN Annex, pg 58, section 3.61

As we set out in [section 5.7.4] on technically assessed IT expenditure, some of the costs proposed for the re-opener mechanism include operational IT such as front office systems, back office systems, device refresh, network control systems and customer solutions and are essential "mandatory" projects required to run and operate our business safely and efficiently as articulated in the IT appendix and supporting EJPs⁶⁰⁸. These projects have a high level of maturity, cost certainty and are not uncertain in nature; we know we must do them and have substantial evidence and experience in GD1 to support the application and as such we would not consider them suited to an uncertainty mechanism.

Accompanying this response, we have supplemented the information in our business plan submission with a deeper assessment of risk and risk mitigation against each project. It is our intention to provide sufficient information to enable an ex-ante determination as we think that given the known and certain aspects of these costs an ex ante allowance is more appropriate.

Should the assessment conclude however that a reopener mechanism would be more appropriate then it is very important that there is consistency in the definition of this reopener and the definition is broadened out to include operational and non-operational costs.

Type 2: Inconsistency in stated approach or methodology expenditure currently identified for this uncertainty mechanism is well established in scope, costings and project plans and should not be included in a reopener.

Secondly, and as set out in [section 4.2.1] on data digitisation, we do not consider limiting the reopener to capital expenditure only is appropriate and believe this could lead to a distortion in the investment activity undertaken. Operational costs are an important part of IT services and particularly as we look to ensure high quality data is provided to users through our digitisation strategy. As such we do not think that it is appropriate for them to be excluded from an uncertainty mechanism. We note that transmission networks⁶⁰⁹ have an operating cost escalator to provide allowed expenditure networks as a part of their totex to implement efficient IT enhancements and think that this should be considered here as well.

Type 2: Inconsistency in stated approach or methodology: The limitation in scope risks introducing distortions into investment decision making.

In terms of the timing of the reopener, we have concerns depending on the costs that are covered by the reopener. If it is anticipated that the reopener should cover core IT expenditure, then it is important to have it as early as possible to ensure that essential investment continues to take place. If in contrast this reopener is primarily focused on data digitisation then we think that more time to develop clarity around the implications of the data digitisation principles, associated needs cases and to then define appropriate investment cases to deliver those needs cases is more appropriate. As such we would suggest an additional reopener window in April 2022 specifically to capture the improved understanding in data digitisation over the coming year. We also agree with the decision not to implement a materiality threshold.

7.2.4 Physical Security

- Q19. Do you agree with our approach to using a re-opener mechanism for changes to government physical security policy?**

Yes, we agree with the GD2 approach for physical security. The majority of SGN's Critical National Infrastructure security upgrade works will be completed by the end of GD1, with the exception of £2m requested for **Redacted**

Any change to government policy on physical security is unlikely to affect us, unless the criteria are changed. However, if the criteria are changed, we would expect a re-opener mechanism would be the ideal opportunity to request any additional funding if required.

⁶⁰⁸ Appendix 011 – SGN - IT & Cyber Resilience – Dec 19, this was supported by 18 EJPs and CBAs that went into the technical details.

⁶⁰⁹ RIIO-2 Draft Determination – Electricity Transmission Annex, July 2020, Para 4.62, pg 79 and RIIO-2 Draft Determination – Gas Transmission Annex, July 2020, Para 4.39, pg 52

7.2.5 Addressing changes to legislation, policy and technical standards

• Q20. Do you agree with our approach regarding legislation, policy and standards?

Changing legislation has a fundamental impact on our cost base. It is correct that it should be subject to a reopener, not least given the impacts of COVID-19 and Brexit and unknown impacts they will have on the legislature.

We strongly disagree with the proposed approach not to include a broader reopener that focuses on changes in legislation, policy and standards. Changes to legislation are self-evidently outside the control of the gas networks, and can have a significant impact on the way we operate the business from guidance from HSE and other government departments.⁶¹⁰

Disagreement as to how the methodology should be applied

The draft determination identifies some of these changes, but we think that there are other areas where changes arise from that should be a focus for this uncertainty mechanism.

Health and Safety Standards Executive (HSE).

The HSE is an important regulatory body that influences our operational practices. The current regulatory system is driven through EU Directives which are implemented into the UK Legislation framework. This will change post Brexit and the HSE in particular will review the current framework. An example of this is the HSE's approach to the Grenfell Tower fire, where a new HSE Buildings Safety Directorate has been established to lead the tri-partite governing body regarding the new safety case requirements for high rise buildings following the Hackett Enquiry which could be further strengthened when the Public Enquiry concludes. Whilst many of these changes affect business and operational procedures, there are some important changes that can significantly change the cost base and may be brought about due to issues that arise in other sectors.

There is a growing focus on health in the UK and further legislation is anticipated to drive the societal changes required. As an example, within our business plan, we accommodated the known changes in working hours to reduce fatigue¹.

Redacted

Similarly, as we come to terms with working in the aftermath of COVID-19 we would expect to see a significant focus on measures to limit transferability of infections at work, with a view to making us more resilient to future infectious disease or pandemic. These may be introduced by central government, local government or the HSE. An example of this the recent change in Government strategy in replacing Public Health England with the National Institute for Health Protection focussing on health threats in the future.

Employment Law

Employment legislation is often defined through the court. These judgments may take place several years after the actual legislation at dispute and it is the cost of responding to that legislation that may have material impact. These again can often focus on specific points of employment law and may be a spill over from legislation targeted at other sectors of the economy such as the gig-economy. Recent examples include a case with the fire service and whether standby costs should be paid as working time is an example that could have repercussions for the industry.

Environment Agency / Scottish Environmental Protection Agency

Changes in environmental standards can range from changing waste legislation to local air pollution. As an example, there has been a recent review of the Environment Agency's Regulatory Position Statement on the designation of waste into hazardous and non-hazardous waste. These sorts of changes can have a significant impact on costs of treatment and disposal of waste. Future change may include zero waste or circular economy policies, or policies designed to limit the use of plastics or non-recyclable materials.

Local and national government

Government or local authorities are likely to introduce policy designed to accelerate the pathway to net zero. This could range from restrictions on the time at which vehicles are permitted to enter an area through to complete bans on specific

⁶¹⁰ An equivalent reopener was set out in our business plan, section 12.3.6

vehicles or the phasing out of a class of vehicles. Successful policies, such as low emission zones, are likely to be rapidly adopted by different regions.

As an example, Transport Scotland⁶¹¹ released the indicative timeline for implementing new Low Emission Zones in Glasgow, Edinburgh, Dundee and Aberdeen on 26 August 2020. The schemes are not yet fully designed with limited information on boundaries, vehicle types and charges to be levied making it difficult for us to assess the impact. The implementation is planned for February 2022 - May 2022.

Decarbonisation legislation could also put in place more stringent requirements to reduce fugitive emissions or release to atmosphere of high global warming potential gases such as methane that could increase the operational cost of the network.

Brexit and independence

It is hard to anticipate the full impact of such dramatic social and political changes as Brexit or Scottish Independence. By definition if the impact can be anticipated then we should be in a position to take appropriate mitigating actions. For example, our ability to respond to COVID-19 was supported by the fact that we had already established an appropriate stockpile of key materials in advance of Brexit. Rather, the concern is the unanticipated shocks that may arise as a result of a sudden or dramatic change in political landscape.

Hydrogen and net zero.

Whilst we think that triggers associated with the net zero and heat-policy re-openers capture most known legislative changes relevant to Energy System Transition, there should be flexibility to other legislative changes too.

We have provided a detailed explanation of legislative and regulatory changes in relation to hydrogen trials, both to BEIS and Ofgem in our H100 Fife bid⁵ in this year's Network Innovation Competition and a wider review of supporting legislation for hydrogen will require development once established as a decarbonisation option.

7.3 GD specific uncertainty mechanisms

GDQ42. Do you have any views on our common UMs that haven't been covered through any of the specific consultation questions set out elsewhere in this chapter? If so, please set them out, making clear which output you are referring to.

There are a number of uncertainty mechanisms where we have comments that are not addressed by direct questions. These include;

- The application and coverage of pass through costs [[section 7.3.1](#)]
- The application and coverage of the HSE Policy changes reopener [[section 7.3.3](#)]

7.3.1 GD specific pass-through costs

Joint Office should be treated as a pass through item to enable substantive change in roles.

Our submitted business plan was based on the continuation of the Joint Office's current role, however we now recognise the need for a limited change in structure. This has stemmed from the discussions held with Ofgem and our understanding the Joint Office will be required to hold a more significant role, operating as a code manager in line with the code governance review in order to facilitate cross-sector changes needed to deliver the government's future energy vision. Ofgem has expressed the clear expectation⁶¹² that industry proactively seeks to deliver the intentions of the code

⁶¹¹ <https://www.transport.gov.scot/news/new-indicative-timeline-for-introducing-scotland-s-low-emission-zones/>

⁶¹² UNC Modification Panel minutes, July 2020, pg 11, (b) Cross Code Workings: <https://www.gasgovernance.co.uk/sites/default/files/ggf/2020-08/Panel%20Minutes%20and%20Voting%20Record%20261%2016%20July%202020%20v2.0.pdf> "In relation to the UNC and IGT UNC he suggested that industry parties can come forward with proposals to make the process better and do not need to wait for an Ofgem direction. He stated that he considered the direction of travel for code governance as set out in the review, and other developments such as the Retail Energy Code, was sufficiently clear."

governance review without dependency on a formal regulatory driver, and as such we consider this creates a change in requirements for the future Joint Office strategy since our original business plan submission.

The Joint Office currently operates in the role as code administrator, managed and funded by gas transporters under our licence⁶¹³. The Joint Office's workload is driven by the volume of modifications and associated workgroups, of which the gas transporters are not in sole control. A recent increase in the number, complexity and urgency of modifications⁶¹⁴ has highlighted the difficulty in predicting Joint Office expenditure, with any exceptional workload creating a funding risk for the gas transporters due to the conflict between a fixed allowance and our responsibility not to fetter the Joint Office's work, and therefore the progress of the industry. Furthermore, stakeholders are expressing a clear desire⁶¹⁵ to have a more empowered code body – for example with the ability to raise modifications and manage legal text provision centrally⁶¹⁶.

As such, we consider it is appropriate for the Joint Office to become subject to pass-through arrangements. Such arrangements will facilitate expansion of the Joint Office's role to that of a code manager and will empower non-transporter stakeholders to shape the future strategy, resulting in improved outcomes for shippers and consumers. Pass-through arrangements would reflect those confirmed in the draft determination in relation to the CDSP⁶¹⁷, where workload is equally industry-, rather than transporter-driven. Furthermore, while moving the Joint Office towards a code manager role is no longer dependent upon a regulatory driver, flexibility is required in order to ensure that any future code governance decisions made beyond the start of the price control can be operationally reflected.

For completeness, Joint office costs for both our Scotland and Southern networks are less than £0.3m per annum.

Type 3: Difference in opinion in terms of the methodology that should be applied

Recovery of third party damage costs

Whilst we agree with and support the notion that GDNs should attempt to recover all costs from responsible parties, Ofgem need to take care when drafting any licence obligation that requires the attempted recovery of all costs from responsible parties and insurance policies. Any decision on cost recovery will need to take into account the issue of materiality (ie. the level of effort that it is reasonable to exert compared to the sum involved) and this trade off can often be highly specific to a location or an incident.

As such we agree with the objective but do not believe that a licence obligation is necessary nor provides the desirable level of flexibility.

Type 3 - Disagreement as to how the methodology should be applied

Recovery of theft of gas costs, shrinkage costs and NTS exit capacity charges.

We agree with the proposals to replace the current structure of theft of gas so that all investigation and recovery sums are shared through the totex incentive mechanism. This will reduce the associated administration burden and make a clearer incentive for pursuing value. Similarly, we support the clear separation of shrinkage cost pass-through and NTS exit capacity charges.

Please note that the NTS exit charges in non-controllable costs will need to be updated for the change in the NTS charging methodology that comes into force in October 2020. These changes will result in a significant increase in Scotland's charges compared to the numbers in the draft determination.

Type 2 - Inconsistencies in stated approach or in the application of a methodology. NTS exit charges need to be updated for latest charging regime.

⁶¹³ Standard Special Condition A12, 1: "The licensee shall: (a) together with the other relevant gas transporters, establish, operate and develop arrangements (joint governance arrangements) for: (i) the administration of the network code modification procedures"

⁶¹⁴ Recent modifications have involved a greater degree of technical complexity, have required a larger number of workgroups, and have received a greater number of alternates. For example: 0621 and 0678 Amendments to Charging Regime. COVID-19 gave rise to an unprecedented number of urgent modifications, for example: 0721-0726.

⁶¹⁵ Demonstrated by non-transporter raised UNCO676R *Review of Joint Office of Gas Transporter Arrangements*

⁶¹⁶ Legal text is currently provided by the Gas Transporters on a rotational basis, funded through our own allowances rather than that associated with the Joint Office.

⁶¹⁷ Central Data Services Provider: Xoserve. GD-A pg 121.

7.3.2 Repex – tier 2a iron mains

We agree with the position taken on Tier 2a iron mains and with the adjustment of allowances to the new size bands in order to align with the HSE categorisation.

Type 6 – Broad agreement with position put forward in draft determination

7.3.3 Repex – HSE policy change

HSE policy reopener should be extended beyond the IMRRP to include all forms of HSE direction.

We agree with the repex HSE policy changes and its application to potential changes in the Iron mains risk reduction programme, however we believe that the HSE policy change reopener should be broader than just the repex programme, and an appropriate re-opener should also encompass other changes in HSE policy such as the impact of directives around fatigue or changing derogations around the treatment of ballasting at SIUs.

As we set out in our business plan⁶¹⁸ as duty holders we conform to a set of statutes. If the statutes are changed or if there are material changes in the HSE's enforcement policy for the IMRRP, change in existing derogations such that currently cover the SIUs or additional HSE requirements not yet identified (e.g. risers) then this should be subject to an uncertainty mechanism which could be triggered at any point in GD2.

Treatment of fatigue – current

Redacted

Redacted

Type 1 - Factual or computational errors. Incorrect categorisation of costs and uncertainty.

Treatment of fatigue – future

Redacted

Redacted

⁶¹⁸ SGN Business Plan, Dec 2019, section 12.3.1 pg 123

⁶¹⁹ RIIO-2 Draft Determinations – SGN, Para 3.12, pg 38

⁶²⁰ RIIO-2 Business Plan Guidance – June 2019, Para 5.8 pg 26

⁶²¹ Raised at meeting on the 2nd sept 2020.

Redacted

Type 3 - Disagreement as to how the methodology should be applied. The HSE policy change needs to be extended to include all HSE related changes, such as the impact on directions on fatigue.

7.3.4 Repex – Tier 1 iron stubs reopener

GDQ43. What are your views on the proposed re-opener for Tier 1 stubs?

We disagree with the way the reopener is structured and are concerned that it will effectively become inoperable in GD2.

We support a common uncertainty mechanism for the decommissioning of Tier 1 iron stubs which should be based upon the known workload for each GDN that will become clear following completion of the review being undertaken by the HSE.

Those Tier 1 iron stubs requiring an intervention should be treated as a mandatory workload, albeit the unit costs of replacement will be atypical due to the short pipe lengths and complex geometries involved where connecting to larger diameter Tier 2 and Tier 3 iron parent mains. **The actual stub length and geometry will not be clear until work is underway, and the stub excavated.** This creates a higher level of uncertainty around potential costs and it is reasonable to expect that contractors will require this risk to be managed through a formal contract variation process.

Given the known population of Tier 1 iron stubs within SGN, it remains our view that the work will need to be completed over two price control periods and an uncertainty mechanism in GD2 will be necessary.

It is not clear in the draft determination documents what the proposed materiality threshold⁶²² is for this uncertainty mechanism. Communication at the repex working group⁶²³ suggests that a materiality threshold of 1% is being considered for this reopener. As we set out in the plan we have an anticipated annual expenditure of £7m/yr⁶²⁴ which would be significantly lower than a 1% materiality threshold proposed.

Type 2 - Inconsistencies in stated approach or in the application of a methodology. The sums involved would not trigger the materiality threshold.

We recognise the need for an uncertainty mechanism that covers tier 1 iron stubs given the HSE review that is currently underway. We set out in our business plan⁶²⁵ that whilst tier 1 iron stubs are a mandatory replacement project, there may be a scenario where, by categorising the tier 1 iron stub as a part of the overall parent main rather than in isolation, we should be able to reduce the amount of work. We estimate that this could reduce total potential workload to about 35%, which we should be able to complete in GD3.

Given this is a mandatory requirement, we have to progress the work in GD2 unless we can secure agreement on this approach with the HSE. For these reasons we think it is correct to proceed on the basis that the work needs to be done, and for these reasons we proposed a use-it or lose-it mechanism, with the alternative being a negative reopener.

One concern that we have with the way the current re-opener is proposed is that there is no clear trigger point– the work is a mandatory requirement and as such there may not be an official announcement through which a reopener could be triggered. Our concern is that without a clear trigger then the reopener may drift to a point where the problem becomes unmanageable in RIIO-GD3.

Type 3 - Disagreement as to how the methodology should be applied. There is a lack of a clear trigger that would enable the reopener to take place.

⁶²² There appears to be a discrepancy on this point between the communication to the working group and the licence drafting

⁶²³ Repex Working group, 31st July 2020, slide 25 of 30

⁶²⁴ We estimate the current materiality threshold would be likely to be £20m in allowances over the 5 years.

⁶²⁵ SGN Business Plan, Dec 2019 section 12.2.3 pg 119

Whilst we agree with the principle of an uncertainty mechanism, we think the design characteristics need to be very carefully considered. If the decision is to maintain a positive reopener where companies apply for funds (rather than a negative reopener mechanism) then it is important to ensure that the materiality thresholds are appropriate.

7.3.5 Repex – diversions

GDQ44. What are your views on our proposal to introduce a <7bar diversions re- opener?

The reopener should be extended to cover all pressure tiers rather than just less than 7 bar as it is the high pressure tiers which often have more substantial risk exposure. We are concerned that the high materiality threshold could prevent it from being triggered.

We agree with the reopener for diversions but it should cover all pressure tiers.

In terms of the design of the reopener, we think that the timing of the re-opener in January 2022 is probably too early and would prefer it to be put back year to January 2023. Similarly, we think that the materiality threshold of 1%, £20m in allowances is very high for projects to successfully evidence that they will achieve this threshold in the first three years of GD2.

Finally we do not understand the rationale for constraining the re-opener to only cover projects less than <7bar given the scale and materiality of work on the network greater than 7bar is an order of magnitude higher. It would be helpful to understand the reason why this threshold was selected and to have clarity on the coverage. It is our view that this should include any diversions that may also come about as a result of legacy contracts⁶²⁶ or quarrying activity. We think that such adjustments would bring us into line with gas transmission where a 'Quarry and loss' reopener has been permitted⁶²⁷.

A recent example of why this is required a situation in Scotland, where a quarry has encroached too close to the side of an LTS pipeline and requires a diversion. The quarry is in receivership and the last claim will be to the insurance providers. If that is unsuccessful and all reasonable attempts to recover costs have been exhausted, then it is appropriate that a reopener mechanism should cover the outstanding amounts⁶²⁸

Type 3 - Disagreement as to how the methodology should be applied

7.3.6 Repex – MOBS safety

GDQ45. What are your views on the triggers and windows for the MOB's safety re- opener?

We agree with the proposed MOB's safety re-opener and would like to confirm that the absence of a materiality threshold would appear to be sensible in this instance.

In our business plan⁶²⁹ we had proposed a 'legislative and regulatory change' uncertainty mechanism that would have covered outcomes of the Grenfell report, changes to HSE policy or working hours. We think that these are important to capture in an uncertainty mechanism and would support broadening this beyond just multi-occupancy buildings.

On this basis we believe a broader trigger is merited, which relates to any HSE regulation or legal text that can be demonstrated to have a material impact on costs during the GD2 period and where the financial impact could not have been forecast with sufficient confidence at business plan submission.

Secondly we note the proposed definition is very specific to the existing MOB population, however there is a current piece of work being undertaken by all GDN's through a joint working group to review the ongoing requirements for 'Complex Distribution Systems' (CDS) which will form part of the overall MOB category. This group meets on a regular basis, at least once a month currently to discuss the CDS work as well as other MOB matters. Although a definition for the CDS has not been formally agreed and is under review at this time, the current proposal is:

⁶²⁶ SGN Business Plan, Dec 2019 section 12.2.11., pg 122 and Appendix 021 – SGN – Transmission integrity compliance – Dec 19

⁶²⁷ RIIO 2 Draft determinations – Gas Transmission Appendix, para 4.12, pg 46

⁶²⁸ Email exchange OFGEM – SGN regarding compulsory purchase order (CPO) -11/06/2020

⁶²⁹ SGN Business Plan, Dec 2019 section 12.3.6 pg 124

Defined as a multi-occupancy building of industrial and/or commercial units that do not meet the classification of either a high rise or medium rise building, where supplies are to two or more primary meter points and the design and installation of the pipework predates the industry standard IGEM/G/5 Edition 2.

These will typically be buildings of multi-occupancy such as schools (inc. boarding schools), hospitals, care homes, shopping centres, stadiums, rail stations, ports, airports etc. and may not be limited to 3 stories or higher.

7.3.7 Heat policy (including energy efficiency)

GDQ46. What are your views on our consultation position to address bespoke decarbonisation of heat re-openers through our proposed innovation stimulus, net zero and Heat Policy re-opener mechanisms?

In principle, we agree with the position being proposed in the Draft Determination to address decarbonisation through the use of the innovation stimulus, net zero and Heat Policy re-opener mechanisms. These generally align with the funding mechanisms we proposed in our Business Plan⁶³⁰ to undertake the necessary projects through R&D and trials during the GD2 period.

We do however have some concerns and require some clarification in particular areas, namely: how these mechanisms will work in practice, timing for implementation prior to GD2 in relation to the SIF and the level of funding that has been attributed, specifically for SGN in the reduction in our requested Energy System Transition NIA allowance from £51.4M to £30M (which we see as developing the foundations for larger scale trials and demonstrations). We look forward to working with Ofgem to develop these mechanisms further as we prepare for the start of GD2.

Type 3 - Disagreement as to how the methodology should be applied

GDQ47. What are your views on the questions set out in paragraph 4.57 of this document in relation to large hydrogen projects?

Para 4.57 sets out a series of questions which we have looked to answer below;

Should costs for industrial hydrogen decarbonisation projects be socialised or targeted?

Based on feedback from our CEG/Stakeholders, and our Future of Heat specialist panels¹², we believe these costs should be socialised across gas customers, with a fair distribution of costs between existing and future customers consistent with Ofgem's duties.

What level of contribution should there be from industry for long-term asset investment projects in this space?

SGN's role in the development of a hydrogen economy is to accommodate the energy that producers wish us to distribute, to customers that want it. Beyond this, our role is to support and stimulate the transition to green gas through our networks towards net zero. Significant investment in large scale hydrogen production⁶³¹ will be required to meet net zero, and we need to ensure that our network is ready and capable of deployment.

Is the project intended to inform or reflect (be triggered by) a heat policy decision? If the latter, what policy decision needs to be made? This could include changes to policy frameworks to allow increased volumes of hydrogen blends into the national or local transmission system.

⁶³⁰ Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019 – Page 5, section 2 (Our Proposal for GD2)

¹² Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019 – Page 18 and 19, section 3.5 and 3.6 (Future of Heat Specialist Panels)

⁶³¹ Committee on Climate Change – Hydrogen in a low carbon economy – November 2018 - <https://www.theccc.org.uk/publication/hydrogen-in-a-low-carbon-economy/>

At a high level, the below changes to the framework must be implemented. However, projects being carried out under SGN's proposed programme of work in GD2¹⁴ will help further refine the required policy changes required to mandate the widespread transition to hydrogen across GB gas networks.

- the quality and composition of gas, as set out in the Gas Safety (Management) Regulations 1996 or Gas (Calculation of Thermal Energy) Regulations 1996
- the connection charging arrangements for distributed entry connections
- the connection charging arrangements for domestic premises
- the obligations on GDNs to include the promotion of energy efficiency amongst gas customers implemented by the making of an order under section 33BC of the Gas Act, 1986 by the Secretary of State
- the future role of gas networks in the heat sector as determined by UK and devolved government policy that may result in parts of the existing network either being decommissioned or made ready to convey hydrogen.

We believe that a solution for H100 Fife can be implemented that requires no derogation, licence consent, licence exemption or changes to regulatory arrangements. The only likely requirement would be a letter of comfort from Ofgem addressing the fit of the project into The Gas (Calculation of Thermal Energy) Regulations 1996 (as amended)⁶³².

As we progress to conversion trials, such as H100 Fife ph2 and H21 ph3, exemption to the GS(M)R for 100% Hydrogen from the HSE and affected customer consent will be sought, unless new legislative powers are introduced. Hydrogen does not have a framework of legislation in the same way as natural gas; therefore, it is expected, subject to the success of key projects such as H100 Fife, that new legislation will be introduced.

How are GDNs ensuring that projects are coordinated and avoiding undue duplication? Which evidence gaps will each project fill?

Coordination/avoidance of duplication is an existing feature of the NIA and NIC governance. We are not aware of any unnecessary duplication associated with the programme of work we have undertaken. It is assumed that minor changes will be made to the NIA framework and that the SIF framework will reflect the current provisions in this regard. The national evidence programme for hydrogen transformation is being co-ordinated between distribution networks, wider industry, UK (BEIS) and Scottish Government.

Whether the projects should be considered for our late competition model (see Chapter 9 of the Core Document).

Ofgem seek to apply, or replicate competition in construction and operation of future new, separable and high value projects in electricity and gas networks in order to lower bills for energy consumers. This is done through a variety of late competition models.

We broadly support the principle of competition for new independent infrastructure above £100m but consider that there will be a level of project dependency. We recognise that, depending on the rollout of technologies and the associated interventions required⁶³³, it would be too complex to separate individual component replacement, such as metallic sections of the existing network. No SGN projects have been identified as yet that meet the criteria for competition if brought forward within the RIIO-2 period. (Type 6 – Broad agreement with position put forward in draft determination)

GDQ48. Do you have any other comments in relation to this section?

At this stage we have no further comments on this section.

⁶³² SGN H100 Fife NIC ISP Final – April 2020 - https://www.ofgem.gov.uk/system/files/docs/2020/05/sgn_h100_fife_nic_isp_final_06.04.20.pdf, Full NIC H100 Fife bid submitted by SGN 31st July 2020

¹⁴ Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019

⁶³³ H21 NIC – Phase 1 - <https://www.h21.green/projects/h21-nic-phase-1/>

¹⁵ Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019 – Page 3, section 1.2 (Our Objectives for GD2)

7.3.8 Domestic Connections

GDQ49. What are your views on our proposal to introduce a new domestic connections volume driver?

We agree with the application of a volume driver for domestic connections

As stated in our business plan⁶³⁴ we believe a volume driver for domestic connections is appropriate given recent policy developments regarding the provision of gas to new build housing and uncertainty on how climate change policy may develop over the GD2 period. As such we agree with the concept of the volume driver for new domestic connections.

However, this unit cost has to be based on an achievable unit cost for this to be effective and, based on the information provided, it is unclear whether the consumer contribution is included or not. If it is included, then we have a significant concern that the cost of connections may not be appropriately addressed.

7.3.9 New Large Loads

GDQ50. What are your views on our proposal to continue with the large loads re-opener?

We are supportive of the reopener, but would caution that the materiality is likely to be a barrier to it being used in practice.

SGN are largely supportive of the principle underlying this proposal. We agree that, looking forward, these costs have a level of uncertainty associated with them and can be largely unavoidable. In our business plan we had proposed a volume driver for reinforcement work for <2bar and a reopener for reinforcement >2bar⁶³⁵.

Due to the inherent unpredictability associated with end-users' requests to connect new or increased loads to our network, it is imperative that cost associated with doing so can be managed suitably in order to facilitate connection in an economic manner. In some instances, large loads of this nature will necessitate specific network reinforcement to facilitate connection whilst maintaining security of supply to existing consumers. Whilst costs downstream of the charging point are directly chargeable to the connecting party, costs upstream of the charging point will be assessed through the Economic Test to determine allowable SGN contribution. It is this contribution that may necessitate use of the large-load re-opener mechanism if it is not already funded through our baseline allowance.

The current mechanism is intended to be designed to *'manage the risk the GDNs identified while protecting consumers from undue costs because it would only be triggered if such loads actually occur'*. That said, the document sets out that GDNs would have only *'one opportunity to trigger the New Large Loads re-opener – between 25 January 2022 to 31 January 2022.'* We consider that, consistent with the aforementioned stated rationale, it would not be appropriate to limit the reopener to a single window within the 5 year period, with either (i) a more flexible general approach being developed or (ii) at a minimum, a second opportunity later in the period being available for this purpose.

Furthermore, we would question whether the proposed materiality threshold of 1% of annual average base revenues is too high to fully meet the risk to GDN referred to above.

GDQ51. Do you agree with our definition of a 'large load' to use for this re-opener?

As per our own explanation of the loads which may necessitate use of the re-opener mechanism in GDQ50, yes we do agree with the authority definition of a large load.

⁶³⁴ SGN Business Plan – Dec 2019, section 12.2.5, pg 119

⁶³⁵ The reason for this distinction was that above 2bar, site specific factors become more dominant in the cost breakdown and there is a greater variability in project costs.

7.3.10 Smart meter rollout

GDQ52. Do you agree with our proposal to continue with a smart meter rollout re-opener?

We agree with the proposal to continue with a Smart Meter Roll-out Re-opener. However, we have a difference in opinion in terms of the methodology of this re-opener which should be applied, specifically in relation to the materiality threshold and timing associated with the re-opener

Materiality Threshold

As set out in our business plan⁶³⁶, we anticipate that the frequency and complexity of interventions will rise during the course of the programme, proportionate to the increasing speed and complexity of installations on the critical path to meet 85% saturation by 2024. Both SGN and Cadent indicated an anticipated increase in costs in GD2 in relation to smart meter interventions, in comparison to GD1⁶³⁷. The increase in frequency of interventions was reflected in our proposed intervention profile⁶³⁸ in our business plan, which rose from 4% in the first three years to 6% in the final two years of the price control. We also proposed a positive and negative uncertainty mechanism⁶³⁹, in the event that actual interventions are higher or lower than our forecast. The increasing complexity of interventions was also reflected in our unit rates. In the draft determination⁶⁴⁰ this was rejected in favour of a common 2.5% flat intervention rate across the period for all GDNs, accompanied by a threshold (estimated to be c.£20m for SGN). While we welcome the re-opener, we disagree with the methodology of the 2.5% intervention rate upon which it is based.

Type 3 - Disagreement as to how the methodology should be applied. Difference in opinion in terms of the method

As above and per our business plan submission, we anticipate interventions in excess of the draft determination position of a flat 2.5% intervention rate. However, the high materiality threshold means that SGN would need to experience an additional 2.5% interventions (in addition to the 2.5% within baseline) before the re-opener could be triggered. As per our forecast, we anticipate this would occur in years four and five. However, this exposes SGN unduly to significant risk in the interim years, where interventions exceed the 2.5% baseline but have not yet reached 5%. As the roll-out is a supplier-led programme, we do not consider it appropriate for GDNs to carry this risk.

We therefore recommend that the materiality threshold is re-set to accommodate any interventions in excess of the 2.5% baseline rate. This reflects our anticipated forecast based on interventions to date, but also provides the customer with protection should the higher rate of interventions not occur.

Alternatively, we recommend that the smart metering re-opener is subject to aggregation as set out in the draft determination⁶⁴¹. This would alleviate the risk associated with such a high materiality threshold and provide GDNs more protection against the anticipated intervention rates.

Timing

We are also concerned regarding the timing of the re-opener window (25 January 2022 – 31 January 2022)⁶⁴². This window is less than a year after the start of the price control period, when it is likely that the most challenging installations, and those therefore most likely to require intervention, will remain back-weighted towards the end of the period. Given the acknowledgement in the draft determination⁶⁴³ that timing of the smart metering roll-out is out of GDNs' control, it is simply not appropriate for us to carry the risk associated with an early application window.

As highlighted above, given the high materiality threshold, we anticipate that it may only be met in the latter stages of the price control, when the intervention rate has reached an equivalent annual total of 5%. However, we acknowledge that an early window may be appropriate to capture GD1 close-out issues, particularly those which arise as a result of COVID-

⁶³⁶ Emergency Appendix (013), p35, 6.8

⁶³⁷ GD-A, p112, 3.129: Cadent forecast an average annual cost of £1.3m, compared to £0.6m in GD1. SGN forecast an average annual cost of £2.8m, compared to £0.4m in GD1.

⁶³⁸ Emergency Appendix (013), p27, Figure 17

⁶³⁹ SGN Business Plan, p119, 12.2.2

⁶⁴⁰ GD-A, pg144

⁶⁴¹ Core document, p60, and p63 7.33, 7.34

⁶⁴² We have raised this concern during the LDWG

⁶⁴³ GD-A, p144, 4.75

19 catch-up activities. While we therefore recommend that this window is retained, we also suggest a second window in year four of the price control. This would enable GDNs to capture the costs associated with interventions in excess of the 2.5% baseline rate, particularly those as a result of the more challenging installations such as multi-occupancy buildings. We note that there is precedent for multiple re-opener windows, as seen with Repex HSE Policy Changes⁶⁴⁴.

7.3.11 Specified Street works

GDQ53. Do you agree with our proposal to continue with a common streetworks re-opener?

We agree with the trigger that “costs relating to new permit and/or lane rental schemes, or new requirements, and justification that these costs are efficient” However we have some concerns regarding the scope, reference period, and timing.

Scope of the reopener needs to cover all streetworks associated costs.

We believe that the scope of this uncertainty mechanism needs to be broader than solely costs that are introduced by highway authorities. The scope should also explicitly include any new requirements that are required by a wider range of organisations, including the Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Department for Transport, or any other public bodies.

For example, in our Business plan submission, we identified and described the potential impacts of the Environment Agency’s (EA) decision to withdraw Regulatory Position Statement 211 (RPS 211). The *RPS 211* statement allows excavated waste from unplanned utilities installation and repair works, which has not been assessed and classified in line with the hazardous waste technical guidance, to be classified as non-hazardous waste. This represents an effective derogation from the otherwise in-force legislation. This is an industry-wide exclusion and the resultant changes will impact all GDNs. Our discussion of this particular issue can be found in our main GD2 Business Plan⁶⁴⁵ and the EAP⁶⁴⁶, Repair⁶⁴⁷ and Replacement⁶⁴⁸ appendices.

Type 3: Disagreement as to how the methodology should be applied. Scope of reopener

Timing of reopener need to later in price control period to 2024

A single, early, re-opener window of 25 January 2022 - 31 January 2022 is not adequate to capture all associated costs of changes to highway authorities, environmental, and or additional legislative requirements, and the full impact of new Lane Rental schemes, in which at present four highway authorities within the SGN footprint are showing an interest.

Many of the new requirements may not yet be defined and, or, confirmed, and therefore operational impacts and costs will not have yet been identified. As such, a re-opener window this early in the price control is likely to result in submissions from GDNs which are primarily based on forecasts and estimates. Alternatively, a re-opener window later in the period will be based upon a greater amount of actual data and therefore a higher degree of confidence. The quality of the submission will also be dependent upon data sharing between GDNs and the highways authorities, meaning it is important that sufficient time is provided within the price control to ensure data quality and availability is promoted between these parties. We therefore recommend that the reopener window is postponed until later in the price control period to enable a higher quality submission and a greater degree of confidence in impacts.

Type 3: Disagreement as to how the methodology should be applied. Timing of the reopener window

The reference period needs to be dated to the time of plan submission

⁶⁴⁴ GD-A, p127

⁶⁴⁵ <https://www.sgnfuture.co.uk/wp-content/uploads/2019/12/SGN-RIIO-GD2-Business-Plan.pdf> Section 9.81, Table 12-, and Section 12.2.9

⁶⁴⁶ <https://www.sgnfuture.co.uk/wp-content/uploads/2019/12/Appendix-003-SGN-Environment-Action-Plan.pdf>

⁶⁴⁷ <https://www.sgnfuture.co.uk/wp-content/uploads/2019/12/Appendix-014-SGN-Repair-Services.pdf>

⁶⁴⁸ <https://www.sgnfuture.co.uk/wp-content/uploads/2019/12/Appendix-019-SGN-Repex.pdf>

We also have some concerns regarding the effective reference period of the re-opener. The Draft Determination states that costs can be recovered that are “introduced by highway authorities after the RIIO-GD2 price control is set”⁶⁴⁹,

It is assumed that this refers to the point at which the Final Determination is made. Such timing negates the opportunity for claims associated with highway authorities that have introduced permit schemes late in GD1—crucially beyond the point at which GD2 business plans and forecasts were submitted, but potentially before GD2 allowances are set. Given that the business plans were largely finalised in August 2020, nearly 18mths prior to the start of the price control, there is a significant window of legislative change which will potentially be unfunded⁶⁵⁰.

An example is the Surrey Council Lane Rental scheme, due to come into force in 2020 – after our business plan submission but before Final Determination. As such, SGN is unable to recover the costs associated with this new scheme in either our baseline allowances or the uncertainty mechanism.

Type 3: Disagreement as to how the methodology should be applied. Reference period starting point

Additional information

Since the December submission of the Business Plan, results of a field trial coordinated and published by Street Works UK have been made available⁶⁵¹. This study has found that up to 21% of samples were hazardous. Based on the data made available from Street Works UK, we can now present new information providing estimates of the impact of RPS 211⁶⁵².

Training costs have also been included in this cost assessment as there will be a requirement to train all of our operatives and managers with the agreed protocol and legislation. These cost estimates are based on two eLearning modules being developed, one for managers, one for operatives, at a cost of £15k per module.

The cost impact for unplanned works are illustrated in Table 1. These costs are based on historic SGN data, Street Works UK field trial data, GD2 workload forecasts and experiential assumptions. One key assumption is that each external condition report is contained within a limited locale where the ground condition is approximately homogenous.

Summary of estimated costs for response to the revocation of RPS 211 for unplanned works

Southern	2022	2023	2024	2025	2026	Total
Tax	£494,874	£493,219	£492,032	£490,779	£489,400	£2,460,346
Disposal costs	£2,291,911	£2,216,310	£2,145,223	£2,076,124	£2,008,895	£10,738,463
Lab Testing	£1,089,895	£1,053,943	£1,020,139	£987,279	£955,309	£5,106,564
Training	£30,000	£0	£0	£0	£0	£30,000
Sub Total	£3,906,680	£3,763,471	£3,657,393	£3,554,182	£3,453,646	£18,335,373
Scotland						£0
Tax	£494,874	£167,201	£169,823	£172,463	£175,126	£1,179,487
Disposal costs	£762,212	£751,328	£740,418	£729,562	£718,796	£3,702,316
Lab Testing	£362,462	£357,286	£352,098	£346,936	£341,816	£1,760,598
Training	£0	£0	£0	£0	£0	£0
Sub Total	£1,619,549	£1,275,815	£1,262,340	£1,248,960	£1,235,738	£6,642,401
SGN Total	£5,526,229	£5,039,286	£4,919,733	£4,803,142	£4,689,384	£24,977,774

As can be seen from above these costs, for repair work, are material when compared to the RIIO GD2 total repair costs in the Draft Determination⁶⁵³. The £12.9m in Table 1 for Southern is 15% of the total Repair cost identified in the SGN

⁶⁴⁹ https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_gd_sector_0.pdf - page 145

⁶⁵⁰ The RIIO Challenge Group were clear that they did not expect substantive changes between October and December submissions. We kept to this and locked down major changes from mid august

⁶⁵¹ SWUK – Waste Classification Presentation – February 2020

⁶⁵² Note that two different tax rates are associated with disposal to landfill: hazardous waste costs £94.15 per tonne sent to landfill (correct for tax year 2020/21); non-hazardous waste sent to landfill costs significantly less, at just £3.00 per tonne⁶⁵². The application of these rates is directly affected by the withdrawal of RPS 211, which will cause us to incur a greater proportion of the higher tax rates.

⁶⁵³ https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_sgn_annex_0.pdf

Annex. Similarly, for Scotland this equates to 15.2%. Although RPS 211 is an EA position and not related to SEPA, this change in approach by the EA will, in our opinion, most likely be followed by a similar position by SEPA, compounding the requirement for an uncertainty mechanism.

We must also consider the cost impact on our reinstatement contracts for changes outside of a GDNs control. Additional measures that we may be forced to place upon our reinstatement contractors will come with increased costs. These costs could be significant as handling hazardous waste comes at a premium due to additional permit requirements, decontamination protocols, segregation, and disposal methods.

Furthermore, as this legislative change is industry wide, there will be an inevitable pressure on the supply chain while it reacts to the increased demand to the handling, storage and treatment of hazardous waste. This may transpire to be an additional cost pressure as demand outweighs supply.

Type 4: New evidence presented to respond to a point. Updated cost information

7.4 Bespoke uncertainty mechanism

SGNQ7. Do you agree with our proposals on the bespoke UMs? If not, please outline why.

We agree with many of the proposals in the broader sense, and agree that, where possible, uncertainty mechanisms should be common. However we disagree with the conclusion on both ‘process safety’ and external resilience.

We put forward a number of reopeners that were in customers interests and tested these different mechanisms with our customers. Our customers agreed⁶⁵⁴ that fixed budgets should be used for “business as usual” activities and liked the idea of ring-fenced funding through a use-it or lose-it mechanism as long as we could put in place governance structures to demonstrate efficiency. We consider that this was in line with business plan guidance which sets out that well designed uncertainty mechanisms that could accommodate changes in GD2⁶⁵⁵ were a mark of a good quality plan and customer value proposition.

There are two bespoke uncertainty mechanisms however that we think it is important for Ofgem to reconsider.

Process safety

As a direct result of us naming all projects over £0.5m and for them being included as PCD where the allowances are returned to customers if the PCD is not delivered, there is no allowance for other issues that may occur that are unanticipated and have not been picked up in our detailed site assessments.

This bespoke uncertainty mechanism was rejected⁶⁵⁶ by Ofgem due to a lack of robust cost evidence of the likely costs, a lack of analysis of the potential drawbacks and a lack of consumer and stakeholder support.

- **Evidence of likely costs:** In our business plan submission⁶⁵⁷ we gave examples of high-pressure filters at a cost of approximately £0.4m, condensing boiler systems (£0.5 to £0.75m each), rapid deterioration in pressure reduction systems (at £0.5m each) and third party incursion that have required rectification. These projects will emerge in GD2 and it would be unreasonable to expect us identify all issues that will arise over GD2 today.

Type 5 - Evidence that SGN has provided but hasn’t been taken into account or given sufficient weight

- **Potential Drawbacks:** If Ofgem decide not to allow the reopener, then it is very important that the £3m/yr funding should be permitted within baseline allowances, as currently it is not covered by any other

⁶⁵⁴ SGN Business plan, Dec 2109, chpt 12 and Shaping the Business Plan Qualitative Workshops - Sharing Financial Risk. Innovation Investment (ref 083)

⁶⁵⁵ RIIO2 Business plan draft guidance, Dec 18, pg20, Para 5.7; RIIO-2 Business Plan Guidance, Sept 2019, pg 35, para 5.18;

⁶⁵⁶ RIIO-2 Draft Determinations – SGN, table 56, pg 63

⁶⁵⁷ Appendix 021 – SGN – Transmission Integrity compliance – Dec 19, pg 41

uncertainty mechanism. We know that we are going to incur costs in this area, and because the cost of the LTS projects are fixed as PCDs, we will be unable to reprioritise.

Type 2 - Inconsistencies in stated approach or in the application of a methodology

- **Stakeholder and Customer support:** We considered a use-it or lose-it mechanism was the most appropriate mechanism for managing this as we considered it to give the most appropriate balance of risk between ourselves and our customers.⁶⁵⁸

As we set out in our business plan,⁶⁵⁹ the value was sized based on our experience in GD1. If this is not incorporated into this uncertainty mechanism, it is very important that the £3m/yr⁶⁶⁰ estimated cost is returned to our base totex allowance. If it is not, we are being penalised relative to other networks, somewhat due to our attempts to provide as granular and clear data wherever possible.

Type 2 - Inconsistencies in stated approach or in the application of a methodology

Environmental Resilience

Within our business plan, we proposed a reopener 'Environmental and External Resilience'⁶⁶¹ that would cover both the impact of environmental change or external direction that requires a substantial change in our assets such as a legacy 'lift and shift' clauses in the contract. This was rejected in the SGN Annex⁶⁶² on the basis that land development claims and flood risk were considered to be "business as usual" activities and without sufficient claim to support their increase.

We would respectfully request that this is reconsidered. The purpose of the reopener was to allow for the uncertainty around whether a cost will be required or not and to protect the consumer from us assuming that costs would be incurred when they may not be required. Given that we have examples where the cost to rectify varies from £1m to £26m, we consider it more efficient from the perspective of the customer to cover this through a reopener rather than fixing a risk value within the allowances.

We are surprised that Ofgem believe that they do not have evidence that the number of claims or materiality of claims will rise in GD2. There is a significant and mounting body of evidence surrounding the implications of climate change⁶⁶³, and, whilst prior to the start of GD1, we accept practical instances of such claims were very rare, during GD1 we have experienced the following examples;

- Dunkeld⁶⁶⁴, currently identified as a large LTS project with an estimated cost of £26m that has been funded as a part of the GD2 package. The rates of erosion in certain locations can be very high and another project such as Dunkeld could easily arise during the price control period.
- Quarry Impacts. There is currently one example that we have discussed with Ofgem regarding the impact of a quarry which, due to soil erosion, has moved to close to one of our transmission pipelines⁶⁶⁵. The anticipated £3m cost of rectifying the damage may be recoverable from the insurance company, but this is often challenging
- Coastal and River Erosion. Evidence of the increased rate of erosion was presented from four major pipe exposure incidents in and three minor IP pipe incidents as a result of erosion in Scotland and southern⁶⁶⁶ on the distribution network and two examples both in Scotland on our local transmission network⁶⁶⁷.

Since the plan was submitted and during the response to the draft determination, we have experienced a further major erosion event where a 450mm, 70 Bar, LTS pipeline between Glenmavis and Drum offtakes had the ground washed

⁶⁵⁸ Shaping the Business Plan Qualitative workshops - Sharing Financial Risk. Innovation investment (ref 083)

⁶⁵⁹ SGN business plan, section 12.2.8, pg 121

⁶⁶⁰ SGN Business Plan, Dec 2019 section 12.2.11., pg 123 stated "base on our GD1 experience we are confident that new projects will arise in GD2 needing our response. We consider £3m a year to be an appropriate sum to cover this risk. This estimate is not included in our BPD"

⁶⁶¹ SGN Business Plan, Dec 2019 section 12.2.11., pg 122

⁶⁶² RIIO-2 Draft Determinations – SGN, table 56, pg 64

⁶⁶³ <https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-infographic-headline-findings-land.pdf>

⁶⁶⁴ RIIO 2 Draft determinations – Gas Transmission Appendix and EJP: SGN Trans - 029Dunk - EJP Dec19

⁶⁶⁵ CBA for Cowdenhill presenting different options was presented to Ofgem on the 7th July 2020, in support of a compulsory purchase order application.

⁶⁶⁶ Appendix 012- SGN – Distribution integrity Governors – Dec 19. Pg 18 examples of Memory Lane in Dumfries, Scotstown in Banff, South Esk in Brechin, and Langston Harbour in Portsmouth

⁶⁶⁷ Appendix 021 – SGN – Transmission integrity compliance – Dec 19 pg 21 examples of Kincaigie and the River Don.

away from around it as a result of extreme environmental conditions and flooding in the adjacent river, the Black Devon. This exposed approximately 70m of pipeline and nearly resulted in the loss of 20,000 customers.

It is this type of incident that demonstrates why we need to have in place a reopener.

Alloa Erosion incident 12th Aug 2020



Type 4 – New evidence presented. Alloa is a good example of how a pipeline that was not considered to be at risk can suddenly be exposed through natural events. It is appropriate that this should be through a reopener.

For many we agree with Ofgem's proposal to move these into common reopeners. These include;

- **Streetworks.** Agree with Ofgem's approach to merge into a common re-opener. It is important that this covers permitting and lane rental, reinstatement costs and hazardous waste management. As set out in section 7.3.11 it is not currently clear that it includes the last two.
- **Smart meter.** Agree with Ofgem's approach to merge into a common re-opener. As set out in section 7.3.10 the adjustments made to allowance to create a consistent point of reference has not been carried out correctly.
- **Tier 1 Iron stubs.** We question whether the methodology proposed is the most appropriate but agree with the principle that the uncertainty mechanism should be common.
- **<=2" steel.** We accept Ofgem's decision not to include this as an uncertainty mechanism. As we set out in the business plan, we think that this is an area where a volume driver could be derived and would be in the customers' interest⁶⁶⁸.
- **New Connections, below 2 bar reinforcement and greater than 2 bar reinforcement.** Again we accept Ofgem's decision only to progress the volume driver for new connections and not to progress a volume driver for the <2bar or a re-opener for the >2bar reinforcement. We considered this was in customers' interests given the uncertainty surrounding the decarbonisation pathways but accept the decision to include it in baseline allowances.
- **Environmental Action Plan.** We think that the introduction of a use-it or lose-it mechanism for environmental action plan expenditure with a stakeholder lead environmental steering group to provide an appropriate level of governance was a good approach to encourage ambition and cost efficiency and was supported by our CEG. We accept the decision and hope that this does not lead to a further weakening of ambition with fleet in particular in the final determination.
- **Cyber assessment framework** Agree with Ofgem's approach to merge into a common re-opener.

⁶⁶⁸ SGN Business Plan, Dec 2019 section 12.2.4 pg 119

- **Legislative change.** We acknowledge Ofgem's desire to provide specific examples and have provided these in [section 7.2.5]. We consider this an important common reopener given the extent of potential changes that are likely to incur.
- **Energy system transition.** We think that this is appropriately covered in the existing common uncertainty mechanism and support its implementation

8 Net zero and innovation

- **Q21. Do you agree with our overall approach to meeting Net Zero at lowest cost to consumers? Specifically, do you agree with our approach to fund known and justified Net Zero investment needs in the baseline, and to use uncertainty mechanisms to provide funding in-period for Net Zero investment when the need becomes clearer?**

We broadly agree, however, it is important to recognise that the First of a Kind (FOAK) and early trials to establish decarbonisation options will be required to bridge the gap to commercial deployment.

We broadly agree, however, it is important to recognise that the First of a Kind (FOAK) and early trials to establish decarbonisation options will not be commercial in the short term.

Ofgem has acknowledged the need for large hydrogen infrastructure and deployment trials but pointed out that these will not be ready to progress in time for Final Determinations in December. We are working with industry and BEIS to map out the hydrogen trial requirements and future pilot phases (such as the industrial clusters).

The two key mechanisms to support net zero are the net zero re-opener, and the SIF. Combined with the NIA funding requested (£51.4m), a biomethane improved access rollout PCD and the CAM, we believe this funding package could provide sufficient flexibility and coverage to move towards net zero at the lowest cost to consumers. We would like to work with you in shaping this mechanism to ensure it enables the readiness of our network to accommodate decarbonisation and system transformation, while supporting investment and decarbonisation needs of stakeholders and customers.

Our objectives for GD2 are ambitious but necessary to achieve the decarbonisation targets. We have set out how we propose to achieve these objectives¹⁵, many of the required projects to do so, how we believe these projects should be funded and what the expected benefits are as a result of achieving our objectives for GD2 and beyond. Within our GD2 proposal a variety of funding mechanisms set out how we will facilitate responsiveness, deliver decarbonisation outcomes and support emerging needs across energy vectors.

Our proposed £51.4m portfolio of NIA projects set out in our business plan is a key part of this and essential to deliver decarbonisation and whole-systems related R&D.

In terms of customer acceptance of our proposal, our stakeholder engagement has indicated that consumers would be willing to pay our NIA Energy System Transition proposals.

The nature of the projects identified are those that as a whole support the development of decarbonisation options, with significant value to the GB customer. As such, by design, there is no direct tangible return from these projects. We therefore argue that we have proposed the largest BAU contribution in GD2 for NIA projects, assuming that the NIA GD2 will mirror the current arrangements in GD1.

We are disappointed that the proposed allowance for NIA EST has been reduced by £21.4M. We do not believe this reflects the urgency or scale of investment that a transition to net zero requires and do not understand the logic applied, wherein SGN has been singled out for criticism for not contributing BAU funding to innovation. We have proposed the largest BAU investment in decarbonisation, regardless of scale, across all of the gas distribution and transmission networks. Historically, we have committed over £4.77M of BAU contribution under the NIC in GD1, see table, shared the largest return to customers attributable to rollout of successful R&D and voluntarily returned £145M⁶⁶⁹. Furthermore, we have gone beyond expectations regarding BAU project sharing, for example, our industry report for SIU Gas Quality,

⁶⁶⁹ https://www.ofgem.gov.uk/system/files/docs/2019/03/riio-gd1_annual_report_2017-18_0.pdf

which was a BAU funded rollout, was shared widely nationally and internationally, informing European gas quality standards⁶⁷⁰.

NIC Project	SGN Contribution (£k)
Opening up the Gas Market	231
Robotics	739.43
Real Time Networks	808.8
H21 Phase 1	379.25
H21 Phase 2	152.2
Robotic Roadworks & Excavation Systems	710.4
H100 Fife (2020 NIC submission)	1,750
Total	4,771.08

Table of SGN NIC contributions over GD1

We feel that the Energy Futures proposal for GD2 is appropriate given the required investment to meet net zero, which is driven by our extensive analysis, identifying the decarbonisation of the gas network as the lowest disruption and lowest cost option to gas customers. Our proposals were subjected to detailed stakeholder review⁶⁷¹ and customer willingness to pay engagement⁶⁷². Since our business plan submission in December 2019, we have carried out further engagement post COVID-19, which still indicates a strong support for our decarbonisation activities.

- **Q22. Do you think the package of cross sector and sector-specific UMs provides the appropriate balance to ensure there is sufficient flexibility and coverage to facilitate the potential need for additional Net Zero funding during RIIO-2?**

We broadly agree the package of cross sector and sector-specific UMs provides an appropriate balance.

8.1 Net zero re-opener

- **Q23. Do you have any views on our proposed approach to a Net Zero re-opener?**

We are concerned that this is an Ofgem only triggered reopener. We think it should be opened to networks as well to present significant changes in investment strategy associated with net zero targeted investment. There should also be reciprocity in thresholds and terms between Ofgem and the networks

We have some concerns that only Ofgem can trigger the Net Zero re-opener. We would like to work through examples of how this would work in practice but suggest that networks should also be able to trigger this mechanism. We are pleased that our examples of net zero reopeners were recognised in the DD, however it is important to work through real examples of how this will work in practice to ensure we are able to deliver to stakeholder wants and needs. Please see an example of net zero reopener in the attached Appendix (Energy System Transition Funding Mechanism Examples).

All net zero options should be carried out with supporting CBA, considering at appropriate scale alternative options (i.e. electrification v hydrogen vs biomethane), and demonstration of value for money for customers through partnership

⁶⁷⁰ SGN SIU Gas Quality Report – June 2017

⁶⁷¹ Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019, Sections 3.5, 3.6 and 3.7

⁶⁷² SGN Business Plan Acceptability Research – August 2020

selection and commercial process. Ofgem must ensure they are agile and responsive to emerging technologies in their triggering of the re-opener mechanisms.

It would be beneficial to gain further clarity on the differences between net zero re-opener and heat policy re-opener.

Once triggered, a balanced spend profile in line with 2045 and 2050 targets for both Scottish and UK governments respectively will be required to share investment and risk between current and future gas customers and ensure deliverability.

The Net Zero re-opener should also consider co-dependent projects that lie out with the traditional remit of the networks e.g. the Acorn CCS project is co-dependent on the Aberdeen Vision, project Cavendish and industrial clusters project

8.2 Innovation

8.2.1 Strategic innovation fund

• Q24. Do you agree with our proposals for the RIIO-2 Strategic Innovation Fund?

We agree with proposals. It is important that the structures that support funding should be flexible and agile to benefit the diversity of projects that at we will progress.

We broadly agree with the proposals set out in the draft Determination Core Document and welcome the opportunity to help shape this funding mechanism.

It is important to recognise that the development of a cohesive and viable pathway for decarbonisation will require the support, through SIF, of projects that are of significant scale and would not be undertaken through business as usual. The value of these can be attributed to the whole energy system transition through the delivery and demonstration of outcomes, leading to roll out on later price control periods. We have set out within our business plans a programme of known SIF projects, and their anticipated cost to support the design of the new SIF mechanism⁶⁷³. An example of this is our "Future of LTS (Local Transmission System)" programme of works proposed to be undertaken during GD2⁶⁷⁴, details of which can be found in the attached Appendix (Energy2 System Transition Funding Mechanism Examples).

• Q25. Do you have any comments on the additional issues that we seek to consider over the coming year ahead of introducing the Strategic Innovation Fund?

It is important to expedite the development of the regulatory framework to enable projects to commence from the outset of GD2 and enable important research that will support the decarbonisation of heat decision-making process.

In order for the benefits of the SIF to be fully realised from the start of the GD2 period, governance needs to be in place ahead of April 2021. This will allow network companies to be able to prepare applications in GD1 for key projects that have long lead time elements such as planning or equipment. Our Future of the LTS project is an example where the timing is crucial to ensure the outcomes are realised in the GD2 period.

8.2.2 Innovation within BAU activities

We think that our approach to BAU innovation was inaccurately reflected in the draft determination and we have clarified the proposals in our business plan below.

Overview of BAU Innovation

Innovation is embedded within our culture and is contained within our operational excellence strategic roadmap. Our people are encouraged to put ideas and solutions forward and we instinctively collaborate with industry peers. In order to

⁶⁷³ Appendix-006-SGN Energy System Transition, Annex 8, GD2 Pathways Projects, Annex, (Pages 44 to 62)

⁶⁷⁴ Appendix-006-SGN Energy System Transition, Annex 8, GD2 Pathways Projects, Future LTS (page 52)

realise the potential value from innovation it is important to take it into commercial deployment. Stages of innovation are often described according to their Technology Readiness Level (TRL), with TRL1 being early stage/concept research, and TRL9 being close to full commercial deployment.

We have since clarified our position through⁶⁷⁵ discussions with Ofgem that ‘BAU Innovation’ should not be exclusive of any TRL stages. We therefore commit to a BAU Innovation approach that focuses on those new products and technique developments that will bring the greatest value to our customers and the networks.

Through our proven track record in RIIO-1 we will continue to drive a BAU approach to innovation which is embedded within our culture. In our business plan⁶⁷⁶ we set out that one of our goals is to continue to reinforce this culture of innovation and development in our business through schemes such as ‘IGNITE’⁶⁷⁷. Some of our leading innovations in RIIO-1⁶⁷⁸ have been initiated through this successful scheme and we will continue to utilise this platform in RIIO-2, ensuring that it is aligned to the latest innovation strategy⁶⁷⁹.

‘IGNITE’ is now an ingrained business function which has been fine-tuned during GD1 to deliver benefits where possible. The idea submissions have ultimately been aligned to SGNs strategic goals and industry innovation strategy and this is now a far more refined process today than ever before with almost six thousand (5,872) ideas submitted⁶⁸⁰.

We are enhancing this approach with monthly visits to our operational depots located in both our Scotland and Southern Networks which provide a targeted approach to day to day problems that our operational teams are having. We are also taking the lead with external workshops facilitated by our innovation team in conjunction with IGEM⁶⁸¹ whereby we presented the latest Joint Gas Innovation Strategy and presented the latest projects along with the other GDN’s.

We have also proven that part of our innovation process includes extensive dissemination of project outcomes to the other network companies with a view to driving further benefits to customers such as CISBOT, MicroStop⁶⁸² and more recently through the Live Service Transfer project. Both the CISBOT (cast iron joint sealing robot) and MicroStop projects have now also been fully implemented to Cadent’s networks whereby we foresee similar benefits within a larger network.

We were the only network company to provide a detailed breakdown and substantiation of our performance in RIIO-1 in terms of benefits, including financial, environmental and safety benefits⁶⁸³, this emphasised the level of reporting that we had put into the innovation appendix where we had transparently gone through each of the projects that we had progressed in GD1, and rated the impact of those projects. This demonstrates our commitment to transparency and reporting, and to a much greater extent than other networks have demonstrated.

SGN Assessment of the DD and Response

We were surprised with Ofgem’s approach to assessing SGN’s plan for NIA funding against four criteria⁶⁸⁴, of which SGN were not considered to have satisfactorily meet the criteria for *“undertaking other innovation as BAU”* and *“process in place to monitor, report and track innovation spending and the evidence that this is already happening”*. These four criteria we broadly set out in the SSMD⁶⁸⁵.

Undertaking innovation as BAU

In setting out why our business plan submission did not satisfactorily meet the criteria two reasons were provided: (i) the level of ambition and (ii) the focus on near market innovations.

When considering the focus on near market innovations, this approach was based on guidance given in the Sector specific methodology decision document⁶⁸⁶ that funding would be required for projects with a payback beyond the length of the

⁶⁷⁵ Meeting between Ofgem and SGN, 4th August 2020

⁶⁷⁶ SGN business plan, pg 131

⁶⁷⁷ SGN Business Plan, Annex 8, Section 3.2 (December 2019)

⁶⁷⁸ SGN Business Plan, Annex 8, Section 3.5 (December 2019)

⁶⁷⁹ Reference the Joint Network Innovation Strategy (ENA website)

⁶⁸⁰ SGN Business Plan, Annex 8, Section 3.2 (December 2019)

⁶⁸¹ Innovation Tuesday’s held every Tuesday in July 2020 (<https://www.igem.org.uk/events-and-courses/innovation-tuesday-net-zero-and-the-energy-system-transition-webinar-jul-2020/>)

⁶⁸² SGN Business Plan

⁶⁸³ Refer to SGN Business Plan, Section 13, Table 13.1 (Innovation benefits from GD1)

⁶⁸⁴ RIIO-2 Draft Determinations – SGN., table 57, pg 66

⁶⁸⁵ RIIO-2 Sector Specific Methodology – Core Document, section 10.62, pg 86

⁶⁸⁶ RIIO-2 Sector Specific Methodology – Core Document, section 10.22, pg 79 “We appreciate the point made by many responses that there are some types of innovation which companies are not inherently incentivised to do using their own money. For example, projects where the payback period extends beyond the length of an individual price control and may not result in an immediate net financial benefit to the individual network company,

price control. We tested this approach with our customers⁶⁸⁷, which demonstrated that our customers did have a strong appetite to support such funding and willingness to pay for it.

Based on the guidance in the SSMD and the customer evidence generated, innovation were categorised into BAU activities that were above TRL level 5 which would have a reasonable opportunity to secure a financial return within that regulatory period and those lower level TRL projects for disruptive and development technologies, below TRL level 5⁶⁸⁸.

We were therefore very surprised with the feedback in the draft determination suggesting that by focusing on services and products with the greatest commercial benefit and most rapid deployment potential that we have a limited desire to innovate. It is equally within the customers interests (through the sharing mechanism) and the company's interest that innovation should be focused on maximising returns in the short term.

We are also surprised that the draft determination suggests that similar feedback was expressed by our CEG, which is contrary to our understanding as their feedback was very positive⁶⁸⁹.

The second point of concern raised in the draft determination was apparent conditionality on the rate of return. This concern is a surprise when firstly the discussion on the appropriateness of the return is clearly focused on energy system transition projects (NIA, SIF projects) and not related to BAU, and secondly the business plan clearly requested such conditionality *"As part of this, companies should set out the desired structure of their proposed RIIO-2 NIA and how much risk they are willing to take on themselves against their NIA."*⁶⁹⁰. Our response was clearly in line with the business plan guidance, and consistent with the decisions set out in the draft determination⁶⁹¹.

On this basis, we do not understand how Ofgem have reached their conclusions that our business plan submission did not satisfactorily meet the criterion.

Monitoring in place.

We were again very disappointed that we were considered not to have satisfactorily met the criteria, considering that we were the only network to clearly set out and report in great detail the innovations that we delivered in GD1 and the provide an assessment of the economic, environmental, social and safety implications⁶⁹². In our Appendix – 008 Innovation, we provided an estimate of the savings that were delivered by each innovation and in order to make the report more informative to the reader, we presented innovations by groups with the lead innovation and the supporting enabling innovations presented as a group so the reader could understand the interactions⁶⁹³.

Altogether the SGN business plan innovation appendix set out 80 pages of details of innovations that we have delivered in GD1. This appendix clearly delivers the last two criteria set out in the SSMD associated with monitoring⁶⁹⁴ we do not therefore agree the conclusion that that we have not satisfactorily met the criterion as set out in the sector specific methodology decision.

including those which deliver benefits to other parties. We recognise this and, for this reason, we will continue to support these innovations using wider innovation mechanisms. We discuss the role of NIA and the new innovation funding pot in supporting innovations that would not otherwise happen below."

⁶⁸⁷ Shaping the Business Plan Qualitative Workshops - Sharing Financial Risk. Innovation Investment (ref 083)

⁶⁸⁸ SGN Business plan section 13.4.1, and 13.4.2, pg 133 and 134

⁶⁸⁹ SGN Consumer Engagement Group, Final Report December 2019, pg 46 *"Innovation in GD2 (13.4 and 13.5) We note that the level of business as usual innovation spending proposed for GD2 (£7.5m total) is relatively limited but are satisfied that SGN has a culture that will drive it to continue to look for innovation opportunities that can be cost effectively deployed. We understand SGN's concern about the need for continued investment in low technical readiness level (TRL) projects that will not deliver savings within this price control (and so cannot be justified as business as usual). We therefore support SGN's request for an additional category of NIA funding to support low TRL projects, subject to SGN making a contribution (as it proposes to do) in line with consumer views."*

⁶⁹⁰ RIIO-2 Business Plan Guidance, 9th September 2019, para 2.75, pg 21

⁶⁹¹ RIIO-2 Draft Determinations – Core Document. Para 8.57 *"Within RIIO-1, the NIC funds 90% of projects, with companies or project partners making a 10% 'compulsory contribution'. However, as the nature of projects funded via the SIF may vary significantly in RIIO-2, for each Innovation Challenge, we propose to consider on a case-by-case basis what percentage of projects would be funded via the SIF."* pg 95

⁶⁹² Appendix 008 – SGN – Innovation – Dec19 Final

⁶⁹³ Appendix 008 – SGN – Innovation – Dec19 Final, section 9, pg 37 to 75

⁶⁹⁴ RIIO-2 Sector Specific Methodology – Core Document, section 10.62, pg 85 The last two bullet point are : *"the processes companies have in place to roll out proven innovation into BAU and the evidence that they are already doing so"* and *"the processes companies have in place to monitor, report and track innovation spending and the evidence that they are already doing so."*

SGN request for consistency

On review of the other networks draft determinations, we note the following:

- One network alluded to the fact that they have included BAU innovation within their business plan submissions and it would appear that this has been accepted with no adjustments made. SGN queries whether it will be permitted to include provision for BAU Innovation focused on operational and process efficiencies within their response to the draft determination.
- Another response indicates that another network has had an adjustment for BAU innovation within their submission for operational and process efficiency related innovations. SGN queries whether it will be permitted to include provision for BAU Innovation focused on operational and process efficiencies within their response to the draft determination.

8.2.3 Network Innovation Allowance

- **Q26. Do you agree with our approach to benchmarking RIIO-2 NIA requests against RIIO-1 NIA funding?**

We think the approach to NIA funding is incorrect as it does not take into consideration the level of ambition that each network submitted. We consider our plan to be the most ambitious and clearly scoped approach to innovation and this should have been reflected in the award of allowances.

No, we feel this approach is flawed. For example, ambitions for net zero changed significantly with the introduction of new legislation in 2019. In parallel, development of early research into the viability of changing gas quality and subsequently hydrogen has progressed to become a leading option for decarbonisation of heat, industry and heavy transport. This is reflected in our Stakeholder engagement. The scale of change proposed will in any decarbonisation scenario require significant investment compared to current levels. We feel that our extensive analysis and detailed approach (which sets out thematically categorised and priced projects that are required to support EST, enabling green gas, validating Hydrogen as an energy carrier and supporting the whole system), is in line with the required investment to meet net zero⁶⁹⁵.

Our objectives for GD2 were driven by our customer and stakeholders' clear ambition to achieve net zero and their confirmation of their willingness to pay. This has been reflected in our engagement both pre and post COVID-19¹, which indicates that existing and future domestic consumers want more low carbon 'green gas' to enter the network. This research also indicates that current and future customers find our business plan to be highly acceptable. Our proposed £51.4m portfolio of NIA projects set out in our business plan² underpins the delivery of all proposed works in GD2, including laying foundations for SIF projects (recognising that this is best practice identified by the NIC expert panel throughout GD1). The NIA programme we have set out de-risks proposed strategic investment through the SIF, re-opener mechanisms and biomethane rollout PCD, allowing low TRL preparations and greater cost certainty.

We are disappointed that the proposed NIA allowance has been reduced by £21.4M. We believe this does not reflect the urgency or scale of investment that a transition to net zero requires and may impact our ability to deliver our programme of work and our high-level decarbonisation targets. We also believe the logic for assessment is flawed since we are proposing the highest BAU contribution of all networks towards projects that have no cost recovery and would not be funded BAU.

Our programme of work in GD2 aims to tee up the strategic rollout of hydrogen to frontier towns in GD3 (pending policy decisions). Any compromised budget in GD2 may have an impact on long term rollout timescales and the industry's ability to deliver. If we are unable to use NIA mechanism as a platform for the uncertainty mechanisms, alternative funding will be required to support the development needs.

⁶⁹⁵ Appendix-006-SGN Energy System Transition, Annex 8, GD2 Pathways Projects

• **Q27. Do you agree with our proposal that all companies' NIA funding should be conditional on the introduction of an improved reporting framework?**

We are supportive of an improved reporting framework and delivered that through our innovation appendix that was submitted alongside the business plan and set out the major innovation groups that were progress in GD1.

We agree in principle that any NIA funding shall be conditional on the introduction of an improved reporting framework. The initial approach from the network-led innovation reporting framework is focused on the RIIO-1 innovation governance and key principles⁶⁹⁶, we need to understand the changes required from this to align a focus on EST and Consumer Vulnerability i.e. less focus on financial benefits and more on net zero, Decarbonisation and longer term Energy System Transition themes.

We were disappointed that we were deemed to not have met the criteria for this assessment as we were the only network company to provide a detailed breakdown and substantiation of our performance in RIIO-1 as far as benefits were concerned⁶⁹⁷, this emphasised the level of reporting that we had put into the innovation appendix where we had transparently gone through each of the projects that we had progressed in GD1, and the impact of those projects. This demonstrates our commitment to transparency and reporting, with no requirement to do so, and to a much greater extent than other networks.

We have also proven that part of our innovation process includes extensive dissemination of project outcomes to the other network companies with a view to driving further benefits to customers. An example of this is the CISBOT (cast iron joint sealing robot) project, this has now been introduced to Cadent's networks whereby we foresee similar benefits within a larger network.

As we move into GD2, we are supportive of a framework for capturing key learning associated with NIA, EST and SIF projects. We are supportive of initiatives being co-ordinated, and undertaken collaboratively where appropriate, recognising that effective knowledge dissemination is the most important form of collaboration. Learning dissemination should be proportionate and relevant to stakeholders and not limited to gas network operators.

We have set out our project proposals, aligned to themes, which have been designed to meet stakeholders' needs, and subjected to detailed review, therefore we expect to be able to deliver these without an unnecessarily complicated sanctioning process. We believe the provisions within the current NIA governance are sufficient to prevent unnecessary duplication. We are not aware of any misalignment or duplication in GD1.

We are also conscious that the innovation benefits framework that has been in development was designed for a different mechanism, more focused on operational efficiency improvements, rather than energy system transition, therefore have concerns with the conditional release of NIA funds pending this framework acceptance. Significant work is already underway to collaborate on the national evidence for decarbonisation of the gas networks, under the banner of Gas Goes Green and through the Hydrogen Programme Development Group (BEIS). This should give confidence that we are engaging effectively to share learning.

• **Q28. What are your thoughts on our proposals to strengthen the RIIO-2 NIA framework?**

We agree with the approach taken to the RIIO-2 NIA framework, although we are conscious that the risk of duplication can be overstated and that throughout GD1 we have demonstrated that we avoided any significant duplication.

Provision of NIA funding

We are very disappointed that SGN's proposed NIA allowance has been reduced by £21.4M. We believe this does not reflect the urgency or scale of investment that a transition to net zero requires and may impact our ability to deliver our programme of work and our high-level decarbonisation targets.

We also believe the logic for assessment is flawed since we are proposing the highest BAU contribution of all networks towards projects that have no cost recovery and would not be funded through BAU, reflecting the lower Technology Readiness Level in the vast majority of our proposals.

⁶⁹⁶ SGN Business Plan, Dec 19, Section 13.3.3

⁶⁹⁷ Refer to SGN Business Plan, Section 13, Table 13.1 (Innovation benefits from GD1)

Ambitions for net zero changed significantly with the introduction of new legislation in 2019. In parallel, development of early research into the viability of hydrogen has progressed to become a leading option for decarbonisation of heat, industry and heavy transport. This is reflected in our engagement, through our CEG/Stakeholders, and our Future of Heat specialist panels⁶⁹⁸. The feedback from these specialist panels and stakeholder workshops has shaped our proposals in GD2, supporting our ambitions for themed, named and priced projects. At the most recent virtual Future of Heat specialist panel event held on the 26 August 2020⁶⁹⁹, stakeholders strongly agreed that the shortfall in NIA funding compared to our proposal will negatively impact our ability to deliver our GD2 objectives.

Funding arrangements

We agree⁷⁰⁰. Our programme aims to deliver R&D funded work throughout GD2 and ensure delivery in the later years of GD2 for a number of these projects. Any unspent funds should be returned to customers at the end of the price control period, rather than year on year.

Scope of eligible projects

We are comfortable that the focus for the funding mechanism should be on Energy System Transition R&D, with consideration given to consumer vulnerability within specific projects. Our projects aim to deliver outcomes from technologies at a low TRL, some of which will cut across the Energy System Transition and Whole Systems sectors.

Considering the impact of innovation on vulnerable consumers

We agree with the proposal that the impact on vulnerable customers' needs to be considered as part of the NIA and SIF process where relevant. We are committed, as an essential public service, to our responsibilities to our customers, our communities and the environment, including supporting vulnerable communities.

Improving NIA reporting

We are supportive of a framework for capturing key learning associated with NIA EST and SIF projects. We are supportive of initiatives being co-ordinated, and undertaken collaboratively where appropriate, recognising that effective knowledge dissemination is the most important form of collaboration. Learning dissemination should be proportionate and relevant to stakeholders and not limited to gas network operators.

We have set out our project proposals, aligned to themes, which have been designed to meet stakeholders' needs, and subjected to detailed review, therefore we expect to be able to deliver these without an unnecessarily complicated sanctioning process. We believe the provisions within the current NIA governance are sufficient to prevent unnecessary duplication. We are not aware of any misalignment or duplication in GD1.

We are also conscious that the innovation benefits framework that has been in development was designed for a different mechanism, more focused on operational efficiency improvements, rather than energy system transition, therefore have concerns with the conditional release of NIA funds pending this framework acceptance. Significant work is already underway to collaborate on the national evidence for decarbonisation of the gas networks, under the banner of Gas Goes Green and through the Hydrogen Programme Development Group (BEIS). This should give confidence that we are engaging effectively to share learning.

Increasing third party involvement

NIA should be set up in a way such that it encourages the participation of third parties, including SMEs. Development of IP through collaboration with third parties needs to be undertaken where relevant to protect the gas customers interests. We believe the current NIA arrangements make sufficient provision for protection of gas customers interests.

In our Business Plan submission, Appendix 006⁷⁰¹, we stated we would be reactive to project partnership and to progress through the period we need to be open to great ideas and opportunities, being flexible and responsive to new proposals and emerging technologies. Many of these may be region specific. It is important to treat commercial proposals sensitively and to ensure protection of origin where demonstrably unique. For emerging technology, we can protect third party ideas by progressing under our Utility Contract Regulations exemption for research and development where there is a demonstrable value proposition.

⁶⁹⁸ SGN Future of Heat Panel – Draft Determination event – 26 August 2020 and SGN Business Plan Acceptability Research – August 2020

⁶⁹⁹ Appendix-006-SGN Energy System Transition, Annex 8, GD2 Pathways Projects, Annex, (Pages 44 to 62)

⁷⁰⁰ Randolph Brazier (ENA) "RIIO2 NIA Transitional Arrangement - ENA Position". Received by Graeme Barton 29 January 2020

⁷⁰¹ EST Appendix 006 – SGN – Energy Futures -Energy System Transition – December 2019 section 2.1, page 6

Quality assurance of projects

The majority of projects have some degree of independent assurance built in as a key milestone to ensure the quality of the outputs and compliance with the scope. However, specific and detailed formal reviews of projects will require additional cost and resource to build in either third parties or network to undertake this process. This may become a resource and timeline barrier in the dissemination of information. In our opinion it may be more appropriate that any compliance and robustness testing should be carried out by Ofgem to ensure consistency.

- **Q29. Do you have any additional suggestions for quality assurance measures that could be introduced to ensure the robustness of RIIO-2 NIA projects?**

We are comfortable with the principle that third-party review should be included within project scope, provided it is proportionate so as not to disproportionately skew the cost of the project. We believe we have delivered high quality projects and project reports throughout GD1.

8.2.4 Closing out RIIO-1 NIA

- **Q30. Do you agree with our proposals to allow network companies and the ESO to carry over any unspent NIA funds from the final year of RIIO-1 into the first year of RIIO-2?**

We fully support this approach, which was identified as a risk from the network companies in January 2020 through a letter from the ENA to Ofgem⁷⁰². Since then we have had the COVID-19 situation which also caused some concern from some of our main project partners. We have put robust plans in place to re-phase some of those projects that have been impacted, the added security of this approach from Ofgem will help us transition our innovation projects and strategy from RIIO-1 to RIIO-2 with no impact on our project outcomes.

8.2.5 Improving data transparency within innovation projects

- **Q31. Do you agree with our proposal that all work relating to data as part of innovation projects funded via the NIA and SIF will be expected to follow Data Best Practice?**

We agree in principle with this although we must ensure that it is proportionate and relevant to the project scope, and recognises the needs of third parties who may be required to protect IP on which their innovation is based. We would welcome the opportunity to explore examples with Ofgem.

8.3 Assessment of SGN Business plan

- **SGNQ8. Do you agree with the level of proposed NIA funding for SGN? If not, please outline why.**

We are disappointed that SGN's proposed NIA allowance has been reduced by £21.4M. We believe this does not reflect the urgency or scale of investment that a transition to net zero requires and may impact our ability to deliver our programme of work and our high-level decarbonisation targets.

We also believe the logic for assessment is flawed since we are proposing the highest BAU contribution of all networks towards projects that have no cost recovery and would not be funded through BAU, reflecting the lower Technology Readiness Level in the vast majority of our proposal.

Ambitions for net zero changed significantly with the introduction of new legislation in 2019. In parallel, development of early research into the viability of hydrogen has progressed to become a leading option for decarbonisation of heat, industry and heavy transport. This is reflected in our engagement, through our CEG/Stakeholders, and our Future of Heat

⁷⁰² Letter from ENA to Ofgem dated 29th January 2020 in relation to Transitional Arrangements

specialist panels⁷⁰³. The feedback from these specialist panels and stakeholder workshops has shaped our proposals in GD2, supporting our ambitions for:

- Continued research and development for projects that support the decarbonisation pathway
- Discretionary rollout of decarbonisation projects, based on examples, subject to governance
- Re-opener for larger projects
- Frontier areas, towns & cities
- Whole systems – Blueprint, micro and macro and charter
- Biomethane – centralised injection points, similar to Portsdown Hill; Avoided propanation for embedded entry; Smart controls for increased capacity
- Off gas grid – options, Highlands & Islands
- Local planning – Councils, LEPs – communication and developing local solutions.

At the most recent virtual Future of Heat specialist panel event held on the 26 August 2020², stakeholders strongly agreed investing in green technology is now even more important to help stimulate the economic recovery post COVID-19.

The scale of change will, in any decarbonisation scenario, require significant investment compared to current levels. We feel that our extensive analysis and detailed approach (which sets out thematically categorised and priced projects that are required to support the Energy System Transition, enabling green gas, validating Hydrogen as an energy carrier and supporting the whole system), is in line with the required investment to meet net zero.

Our objectives for GD2 are ambitious but reflect customer and stakeholders' determination to achieve net zero and a willingness to pay. The demonstration that our network can safely, technically and economically, facilitate the distribution of low carbon gases as a viable alternative in the decarbonisation of the whole energy system is essential during this price control period.

Our proposed £51.4m portfolio of NIA projects set out in our business plan⁷⁰⁴ underpins the delivery of all proposed works in GD2, including laying foundations for SIF projects (recognising that this is best practice identified by the NIC expert panel throughout GD1). The NIA programme we have set out de-risks proposed strategic investment through the SIF, re-opener mechanisms and biomethane rollout PCD, allowing low TRL preparations and greater cost certainty.

The programme of work in GD2 aims to tee up the strategic rollout of hydrogen to frontier towns in GD3 (pending policy decisions). Any compromised budget in GD2 may have an impact on the long-term rollout timescales and the industry's ability to deliver.

9 Increasing competition

9.1 Native Competition

We were pleased that our business plan met the minimum criteria for native competition, but clearly disappointed that we did not qualify for stage 2 reward and would like to understand what measure would have been expected to secure that stage 2 reward. In our procurement and native competition appendix⁷⁰⁵ we provide a detailed approach to how we maximise value from competition and use effective procurement processes to deliver the most economically advantageous tender.

⁷⁰³ Appendix-006-SGN Energy System Transition, Sections 3.5, 3.6 and 3.7

⁷⁰⁴ <https://www.sgnfuture.co.uk/wp-content/uploads/2019/12/Appendix-006-SGN-Energy-Systems-Transition.pdf>

⁷⁰⁵ Appendix 010 – SGN – Procurement Native Competition

9.2 Expansion of late competition

- **Q32. Do you agree with our proposed position on late competition?**

No significant comments, it would appear to be a pragmatic approach.

9.3 Early competition

- **Q.33 Do you agree with our proposed approach on early competition?**

The decision to delay is appropriate; however, we note that there is a proposal to lower the threshold to £50m and would like to check the basis on which this decision is made. Secondly, with the proposal to revisit projects in the business plan we need to ensure that any network expenditure developing those projects is fully recoverable, if not there is a risk that the uncertainty may impact the appropriate development of projects.

