OFGEM

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Network Price Control

SGN

Record of Virtual Meeting

Held on:

Thursday, 22 October 2020

Transcribed by T A Reed (Wiltshire) Ltd
Tel No: 01793 764614

ATTENDEES

Martin Cave	Chair, Ofgem
Jonathan Brearley	Chief Executive, Ofgem
Akshay Kaul	Regulatory Director – Networks, Ofgem
Michael Wagner	Deputy Director, Ofgem
Paul Grout	Non-Executive Director, GEMA, Ofgem
Jessica Friend	Senior Adviser, Regulatory Finance, Ofgem
John Morea	CEO, SGN
Paul Denniff	Network & Safety Director, SGN
Mike Bedford	Director of Corporate Finance and Regulation, SGN
Maureen McIntosh	Head of Customer Experience, SGN
David Handley	Head of Regulation, SGN
Maxine Frerk	Chair SGN CEG
Lucy McTernan	Member of SGN CEG
Roger Witcomb	Chair of the Challenge Group
Robert Hull	Member of the Challenge Group

THE CHAIR: --- by the impact of COVID-19. This and similar meetings are the first of their kind for Ofgem and, despite us not being able to be in the same room, we very much encourage you to get involved. It's important we hear a variety of voices this afternoon.

I'm confident that this meeting will allow us to have an open and constructive conversation about the consultation responses and key outstanding areas of difference ahead of our final determinations, which will be published later this year.

SGN have advised on the topic areas they would like to discuss today. They are: reflecting customer and stakeholder views and, secondly, the right funding for the package.

The company is first given the opportunity to deliver a 20-minute presentation.

We also welcome today members of the company's Customer Engagement Group and Ofgem's own Challenge Group. These groups are formed of independent experts convened to review business plans in detail. They will have an opportunity to feed in their views ahead of our opening the floor for further questions to the company.

Please ask your questions on the chosen topics by using the Q&A function on the side bar. I'm afraid there may not be time to answer every question. We will consider them all when drafting our final determination. Questions will also be asked of the company by members of our senior Ofgem team.

We will be making a transcript and recording of these events which you will be able to watch again and which will be available on our website once all the meetings have taken place.

We start with the knowledge that energy networks in general have delivered a good service, but at a high cost to consumers. This is well-documented through our own and independent evidence. We also know that investment in the energy system is going to have to rise as we meet the net zero challenge at lowest cost to consumers whilst protecting the most vulnerable.

Our overall proposals unlock unprecedented funding for projects to cut carbon emission to create a green, fair and secure energy system for consumers now and in the future. This will enable our sector to play a key role in green recovery.

I would now like to hand over to Akshay Kaul, Ofgem's Director of Networks, who will give a brief update and set the scene in terms of where we have reached in the RIIO-2 process with SGN.

(Unable to accurately transcribe Mr Kaul due to poor audio)

AKSHAY KAUL: Thank you, Martin. Good morning, everyone. I'd like to start by just thanking SGN, the SGN Customer Engagement Group, the RIIO-2 Challenge

Group and all the other stakeholders who have assembled this morning for your very thoughtful and extensive responses to our consultation on draft determinations which we found very useful feedback and evidence that we have been reflecting upon in the last few weeks.

Since we received these responses, we've had very constructive engagement through a range of technical bilaterals, industry working groups and of course supplementary questions raised directly with the companies and the respondents.

I wanted to take the opportunity today to give an account of the progress that has been made in our thinking in analysing the evidence.

I'm going to start by talking about the area of totex, or total expenditure, and our assessment of the costs and workloads involved in this total expenditure assessment. I'll then touch on the progress that's been made and our thinking on the outputs and incentives package for SGN, on the net zero aspect of draft determinations, and finally on matters to do with the finance and the cost of capital.

Our draft determinations on totex for RIIO GD2 and for SGN in particular were based upon the evidence and information provided by the company in their December *(inaudible)*. Since the publication of our draft determinations we have engaged actively and constructively with your gas company, both directly and bilaterally with SGN, especially following responses in various key areas that build up and lead to the overall totex allowances. As you'll recall in the *(inaudible)* two main areas of distance between us and SGN were to do with firstly the workload, particularly in the *(inaudible)* programme and certainly to do with *(inaudible)* volume that we imposed on the industry.

We have had a number of engineering bilaterals to understand better the engineering justification for work on a range of replacement expenditure and capital expenditure projects that have been proposed by SGN, and in many cases SGN have provided significant additional information that we are actively considering as we develop our final determinations.

We have also had constructive discussions about the ways in which we model replacement expenditure within our regression models and the way that we hold the gas distribution companies to account for the delivery of their capex and repex projects.

We are considering how to develop these mechanisms further for final determinations so that they are capable of holding the gas companies to account for delivery but are also proportionate to the task and do not create any undue bureaucracy.

We have had extensive IT bilaterals with the company to understand better their plans for investing in IT developments, and again we have received significant additional information from SGN in this area, but I think it will help us to understand the level of confidence associated with the delivery and costs of these various IT

projects that we are actively considering and assessing the balance of these projects that are funded through the baseline as compared to being funded through reopeners.

On efficiency, we set out our rationale for the 85th percentile benchmark and the ongoing efficiency challenge that we proposed to apply in draft determinations, reflecting both our view of historical performance and our view of reasonable stretching forward performance expectations for the gas distribution company in GD2.

We're reviewing both these key parameters in the light of responses to our draft determinations from a range of stakeholders, as well as the more recent CMA provisional findings on the reference to the CMA on Ofwat's PR19 final determinations, which include the CMA's commentary on the target benchmarks and the ongoing efficiency targets for the water sector. We're making good progress in this area, but more work is required over the next few weeks before we can arrive at a firm conclusion for final determination.

Finally, we have also listened carefully to the concerns raised by SGN and other gas distribution companies about certain aspects of the econometric modelling and we have been working with SGN and the other GDNs who refined further a number of detailed aspects of that modelling for final determinations, such as the modelling treatment of regional factors, that is the difference between different locations in the country, and the modelling treatment of high rise buildings and the particular problems and costs associated with those features, which reflect situational differences, for example, between SGN and other gas distribution networks. Good progress has been made in this area but more work is required before we can arrive at a firm conclusion for final determinations.

In addition, we have jointly identified with the gas distribution networks some technical errors in the modelling for draft determination. We have created an error log and we have worked very transparently with the GDNs to correct these errors. The magnitude of these errors is relatively modest with an impact of around 2 per cent of totex allowances across all of the GDNs, which we believe is comparable with similar stages of previous price controls.

On the outputs and incentives package, SGN submitted significant proposals, particularly in areas related to improving the environment. We welcome this focus and at draft determinations we propose to accept most of SGN's environmental action plan.

In our draft determinations, we also highlighted that there were a number of outputs where we would be interested in further discussion, for example, in the areas of co-ordination of street works, on decarbonising commercial vehicles and deploying stent bags which in the event of a gas leak can reduce the amount of gas leaking into the environment. We have had constructive discussions around these additional outputs and we're giving active consideration to their inclusion in final determinations.

On the topic of net zero, we proposed in the draft determinations a number of uncertainty mechanisms to ensure that the price control can flex to facilitate delivery of net zero projects across the price control period. SGN were broadly supportive of this approach in their consultation response, but highlighted that these need to be agile to support developing net zero projects. We are continuing to work with the GDNs to ensure that these different mechanisms are indeed agile and cohesive, that they cover the different types of net zero projects that we can anticipate, and we are giving active consideration to the setting of appropriate thresholds and the timings for these net zero reopeners.

Finally on the topic of finance and the cost of capital, we have had significant engagement with SGN to understand the financial parameters of the package, and their response to the consultation in this area. We have also been reflecting on the recent CMA provisional determination with regard to PR19 and the water sector. Although the CMA's determination is provisional, we consider it an important contribution to the debate on cost of capital for regulated utilities. There are likely to be areas where it is not obvious that different approaches should be taken in energy relative to water, but also a number of other areas such as the computation of asset betas, the cost of debt allowances and the particular aiming up arguments that the CMA has used for the water sector which we think will tend to be more specific to sectoral circumstances, and we would be interested in stakeholder views on how far the CMA's reasoning in these areas is relevant to the energy sector.

To summarise, ongoing engagement is crucial, we think, to ensuring that we have the ability to fully understand all stakeholder responses and to continue to develop a robust price control which provides sufficient funding for SGN to continue operating a reliable network, creates value for their customers and facilitates net zero. We believe we are making excellent progress towards developing our position for final determinations and I very much look forward to hearing stakeholder reflections later this afternoon.

With that, I will hand back to the Chair, Martin, to continue the discussion. Back to you, Martin.

(Technical issues)

AKSHAY KAUL: Martin has just dropped off, so, John, if I can invite you to make your opening presentation, please.

JOHN MOREA: Hi, Akshay. Can you hear me okay? I assume that is yes. Good afternoon. I'm John Morea, the Chief Exec of SGN. Delighted to be talking to you today. I'm joined – and you'll see them very shortly – by my SGN colleagues, that's Maureen McIntosh, who is Head of Customer Experience; Mike Bedford, Director of Corporate Finance and Regulation; Paul Denniff, Network and Safety Director; and last but not least, David Handley, our Head of Regulation.

I'm going to shortly hand over to Maureen to cover some of our presentation, and obviously we will all be available for questions later, but I just want to give you the assurance that I, along with the SGN Board, believe these meetings and the process Ofgem is driving on behalf of customers is absolutely the right thing to do.

Can I have the slides, please? First of all, I'd like to thank Akshay for his introduction. I think it's inevitable that given a process of such detail and complexity for both parties, there will be disagreements, misunderstandings and opportunities to reassess and revisit many areas. Of course, I'm going to cover a few of those over the next 20 minutes. But I'm here on behalf of the 14 million people who rely on SGN and put their faith in our network to keep them warm when they need warmth, safe without compromise and confident that from one day to the next they know those two priorities will continue to be met unchanged. That responsibility is shared by the Board through my executive team, through management and operational colleagues, and most importantly of all, among the engineers out in front of customers who keep that gas flowing in all weathers at all times of day and of course night.

So, engagement has been at the heart of our plan throughout, so we welcome the scrutiny and appreciate the spirit of co-operation that will ensure we arrive at a fair outcome that works for all parties. I would also like to thank Maxine and the rest of the Customer Engagement Group who have guided our response and customer feedback and challenged us at every stage to make sure we are fully aligned with their priorities and expectations.

From the start we have committed to Ofgem's clear direction by managing a programme of rigorous and open engagement, showing how every activity aligns with customer and stakeholder needs. We've provided an extremely high level of cost transparency and have committed to high levels of efficiency to deliver the service customers want at a price that they are willing to accept. Of course, that's with a return on equity that will secure the necessary investment needed to deliver all our outputs and outcomes.

Today we'll focus on those two themes as we don't believe Ofgem's draft determination recognises the role customers have played in the development of our plan, nor the high quality information we provided to demonstrate our proposals are correct, are necessary and are highly efficient.

The first, I want to briefly recap on our performance over the current price control period, as we are proud of our performance for customers in GD1. We've seen a dramatic fall in customer complaints, down by 76 per cent since 2013, and our overall customer satisfaction levels are up by well over 8 per cent. I am delighted that last week SGN won three awards at the UK Customer Experience Awards, including the gold award for our customer contact centre. Our fuel poor connections, we accepted a significant uplift to our targets midway through GD1 and we are on track to deliver. We have demonstrated our resilience in the face of growing climate change related incidents, such as during the week-long Beast from the East at the end of February 2018 when we retained uninterrupted service levels

despite temperatures in Scotland falling to below minus 14 degrees on many consecutive days.

Our focus on efficiency and approach to managing our network has allowed for a significant payback to customers, and that's not just the £145m voluntary contribution, but we are on track to reduce our share of customer bills by 7 per cent through the GD1 price control period.

Now, innovation has played a role such as our use of robotics like CISBOT to improve street works. That's saved customers money. We've reduced our carbon footprint and minimised disruption in the communities that we serve.

As I said, we are proud of our achievements in GD1 and have a really strong platform to deliver what customers want in GD2.

I'm now going to hand over to Maureen to talk about our promise to customers and the work we're doing to reduce fuel poverty. Maureen.

MAUREEN McINTOSH: Thank you, John. Good afternoon, everyone. I'm Maureen McIntosh and I am Head of Customer Experience for SGN.

Our customers have told us precisely what they want from us over the next five years. They rely on our network for warmth and they want us to continue to keep them warm and the gas flowing, especially on the coldest of cold days. They want us to stay as safe as we are today, to continue to deliver industry-leading customer service, to reduce our carbon footprint and to prepare the network for future decarbonisation. All this and reduce the bill.

I'm pleased to say our plan did all of that and received high levels of acceptability in both our regions before our submission and when we tested again this summer, with the backdrop of Covid-19. We remain confident that the valued contribution from our customers and our stakeholders will be well reflected in Ofgem's final determination.

It's our privilege to serve customers in two highly contrasting parts of the UK. The two regions often require very different approaches to deliver the levels of efficiency and performance that our customers quite rightly demand and expect. In Scotland, we run the smallest network by asset value, but as it covers the largest geographic footprint of any GDN, as you can imagine, resourcing it efficiently can be extremely challenging.

In contrast, our southern network covering south London and the south east serve customers in some of the country's most densely populated local authorities. Contractor demand is high and we need to bring in engineers from other parts of the UK and Ireland to make sure we deliver our southern repex workloads.

In both markets we have an acute focus on serving our most vulnerable customers and ensuring that our engineers who are on the frontline are able to recognise and

respond to all forms of vulnerability. Reflecting on the changing circumstances which have affected our operations over the last seven months brought on by Covid, it has highlighted just how important our focus on serving and protecting our vulnerable customers is. As a consequence, it's brought us even closer to understanding the needs and concerns of our communities. But we have not reduced our ambition in GD2 and our plan promises to create social value for customers that's 17 times greater than the actual costs we would incur for our vulnerable customers, and to maintain our ambitions to reduce fuel poverty by providing access to lower cost heat through our gas connections.

Yes, we have set ourselves ambitious targets and we recognise the policy around us is changing and will continue to change over GD2, but as an example, over three quarters of local authorities in our areas have seen climate emergency declarations which will impact their fuel poverty strategies. But despite these and other challenges, with a strong and properly resourced business, we believe we can deliver our targets in GD2.

I'll now hand you back to John to continue our presentation. Thank you.

JOHN MOREA: *(No audio)* --- fleet and our buildings. Our planned activity would have reduced our total carbon footprint by over 25 per cent by the end of GD2 and would put us on track to be net zero by 2045. Now, that's the legal date for net zero in Scotland and we have adopted that challenging commitment for our southern network as well. But the draft determination no longer aligns with our customer priorities, nor with our 2045 target. In fact, Ofgem's proposals would see the equivalent of another 111,000 tons of carbon added to our total carbon footprint in GD2. Ofgem's own stated environmental objectives for the networks make it clear that we should take no backward steps on decarbonisation, and as it stands the draft determination is counter to this and to the achievement of net zero targets.

Our plan also covers what we are doing to support long-term strategic decisions on decarbonisation by providing the evidence to drive policy that will support the most efficient pathway to decarbonise heat. Recently, I've noticed an upturn in positive conversations about hydrogen from the committee of climate change, BEIS, the prime minister, the HSE and in the mainstream media, and there is a growing confidence around hydrogen having real potential as a significant part of the solution to decarbonisation. As we need to continue to build confidence in hydrogen rather than take a wait and see approach, we think Ofgem should acknowledge the greater confidence in hydrogen as a future pathway to net zero and the role that the networks can play in a future hydrogen distribution system.

Again, in line with what customers have told us, we have an ambitious programme to demonstrate the future role our networks can play, with trials such as our proposed H100 Fife project and also to bring more green biomethane gas on to our network.

Our projects in Scotland and in our southern region address how hydrogen can decarbonise heat and define its role in future transport and define the opportunity to

kickstart a valuable new hydrogen export economy. We are extending projects to create the hydrogen coast in Scotland and focusing on how to decarbonise industrial clusters such as the feasibility work we're undertaking with Southampton Water and in Grangemouth in Scotland's central belt.

Biomethane is another net zero gas that can already play a role and reduce carbon emissions this decade, and we expect to have delivered enough biomethane to heat the equivalent of 250,000 homes by the end of GD1, and we want to increase that to 450,000 homes by the end of GD2. We're using sector-wide platforms like Gas Goes Green to raise awareness and our own platforms such as Heat Without Carbon podcast series where we invite others to openly challenge us and discuss the technical, social and economic considerations for a hydrogen future. Of course, we'll email the panel a link in our latest podcast after this session.

Now, our sector is primed to play an active role in the green recovery and that's to build back better by investing now, and we believe Ofgem's net zero reopener is a powerful tool that will underpin this ambition and confidence as we manage the necessary transformation.

Unfortunately, the removal of several of our projects seems to go against that appetite for delivering net zero. I mentioned before that our customers have supported our proposals to tackle leakage and to speed up the replacement programme to maximise carbon reduction in GD2. They even asked us to accelerate our replacement activity where we think hydrogen production is likely to come on-stream towards the end of the decade.

As I mentioned before, government have expressed a desire to mitigate the long-term economic impact of Covid with investment in a green recovery, and we agree, but this view contrasts with Ofgem's response which delays and reduces our GD2 workload, missing both the green and economic opportunity. The three activities on the slide are cases in point: accelerating our repex programme will have created more jobs and reduced carbon. The same can be said of our proposal to reduce leaky pipes that are not mandated by the HSE, and despite Ofgem's clear guidance on leakage and reducing business carbon footprints, our innovation to capture gas escapes during repairs and replacement activities have also been rejected.

I can't conclude that these activities have been rejected because of pricing as our business plan received the highest level of confidence for costs. We provided detailed justification for all named projects costing over £½m, provided far more transparency and verification for our projects than Ofgem's £2m threshold asked for. Above that threshold, the number of SGN projects awarded high confidence was 80 per cent, double that of any other networks. We received a green for assurance from the RIIO Challenge Group and we responded to over 500 supplementary questions prior to the publication of the draft determination. Considering all of that, it doesn't make any sense to us why SGN has been given the highest business plan penalty and cost reduction, and we would welcome the correction that the evidence supports in the final determination.

I mentioned at the start of my presentation that I was going to cover two themes and so far I've focused on the critical role of customers in our plan and our concerns following the draft determination. I'm going to move on now to our second theme which is considering the necessary financial framework needed to deliver our programme of work.

We need to agree the right totex funding, set acceptable costs of debt and agree a fair and realistic return on equity that correctly reflects the risk profile of our sector.

As it stands, the draft determination is undeliverable due to the significant underfunding of our totex requirements, and this is illustrated most clearly in our recent market evidence relating to our southern replacement work contracts that demonstrates a substantial disconnect between the results coming out of the benchmarking models and what market reality is. The benchmarking models simply have too many flaws to be a reliable guide on efficiency.

The second area of underfunding, as mentioned previously, is on our named projects. Because of the extensive detail we provided and despite the high confidence they were awarded, we have endured substantial cuts in the order of 25 per cent, far greater than any other gas network, and that makes our technically assessed major projects undeliverable. From our perspective, it is simply counterintuitive to suggest that costs awarded high confidence are given greater cost reductions.

The third area of underfunding relates to uncertainty mechanisms. The impact of climate change on our network has been realised with uncomfortable frequency. In August this year, exceptional rainfall washed away the land near Alloa in Scotland leaving an 80-metre length of high pressure gas pipe lines suspended in the air, and this could have led to 20,000 customers losing their supply. That incident wasn't foreseeable, but incidents like this are happening with an increasing frequency. Now, we could have included a cost forecast for the next five years and added it to our base case submission, but given the unpredictable nature of the climate, that would have been wrong. Rather, we think it's in customers' interests that an uncertainty mechanism should be applied which would reassure customers that we're only getting paid for work when it's needed.

The second main point on this slide concerns policy decisions taken by Ofgem which we consider to be incorrectly applied or based on poor evidence, and the result of which is a further £30m annual shortfall. The underfunding is a consequence to the level of efficiency applied, the unprecedented use of the 85th percentile target in benchmarking models and the inappropriate application of productivity indices. It's application will promote inefficient investment decisions and underinvestment that would put us in a situation where we would need to spend more on repair and on patching up faulty infrastructure and less on programmes of planned work which then fall behind. From our customers' perspective, that means we're not improving

anything. We're simply making sure we keep patching up the bits that have remained in service way beyond their expected design life and reliability.

My final point on this slide relates to a £10m shortfall we've identified on necessary workloads, a quarter of which relates to our ability to comply with our safety case. With the rest, we had proposed projects recommended by customers, including the work I referred to earlier on reducing leakage from steel pipes. We fully understand this is Ofgem's call, but all the customer evidence says we're instructed by them to do this work.

So, I appreciate some people may not be familiar with some of the terms being used on this slide, but the heading of this slide is "An unfinanceable notional company", and it means that based on the package proposed in the draft determination, Ofgem's notionally efficient company is not financeable. This would jeopardise our ability to comply with our licence, to maintain an investment grade credit rating while delivering the outputs for the allowances that have been determined.

Financeability is important because it is designed to protect customers over time by ensuring we remain attractive to long-term investors who are willing to fund the necessary work on the networks, and that helps us keep our share of customer bills low. For that reason, given the importance of decarbonisation and the costs of energy transformation needed for net zero, it is essential that we maintain a high credit rating to secure investments at least cost.

We have a number of concerns with how Ofgem have assessed financeability and we've asked an independent consultant to look at the risks associated with the draft determination package. That assessment that they did showed a substantial downside risk that has not been reflected in the draft determination, and if left unchecked will undermine our credit rating to a point where we are considered too high a risk for institutional investors. Even if the CMA's provisional PR19 recommendations on the cost of equity are carried out in full, this would still not solve underlying financeability issues as we need the correct funding of totex reinstated as outlined on one of my previous slides.

Now, I'm going to finish my presentation by reiterating the comments I made at the beginning. We have a common duty to reach a fair deal for customers, reflecting the choices they've made in prioritising their needs over the next five years and the costs that they are willing to pay. We cannot just consider costs on their own. Customers want reliability and resilience at all times. They want us to develop options and solutions for net zero, to do more for vulnerable customers and do more for the fuel poor. They expect us to drive down our carbon footprint and be proactive on climate change, and our plan delivered all this and reduced customer bills in line with their expectations.

Our allowances have to be realigned with the actual costs of providing customers with what they've asked for. This needs to be supported by appropriate cost of capital that remains attractive to investors, recognising a risk profile that is

materially higher than water and the scale of the investment challenge to deliver net zero.

I thank you for your time and we look forward to your questions. I'm now going to hand back to Martin. Thank you.

AKSHAY KAUL: Many thanks, John, and colleagues for that very clear and lucid presentation. I'm now going to turn to Maxine to give us a view from the perspective of the Customer Engagement Group. Over to you, Maxine.

MAXINE FRERK: Good afternoon, everyone. Maxine Frerk, I Chair SGN's Customer Engagement Group, and with me today is Lucy McTernan, who is the Deputy Chair covering Scotland.

So, my first slide, just to remind you, we are a Customer Engagement Group and I'm speaking on behalf of all of my colleagues here, and I was very lucky to have a group that had such a wide range of experience and expertise. I'd also say that many of us have plugged into the wider consumer and stakeholder debates around energy, so it's like we are a funnel for those voices. We attended many of SGN's consumer research events and went through meticulously all the research evidence that they provided.

Off the back of that, I believe we had a big impact on SGN's plan, in particular around decarbonisation. While customers rate safety, reliability and affordability as most important as the priorities, they actually saw SGN as performing well in those areas already. It was the environment that was the area where they were most keen to see SGN spending more, to step up and do more.

That's why we are concerned that our views and the voice of customers and stakeholders more widely don't evidently seem to have been taken into account by Ofgem in the draft determinations. This is particularly poignant for us in areas where we really pushed SGN hard to do more, responding to customer and stakeholder feedback, and where Ofgem have then rejected those proposals. In my mind that undermines our influence as a CEG going forward. Why should John listen to us if Ofgem don't seem to put much weight by our views?

What I want to do is highlight three particular areas and then some quick closing remarks. The first area is the repex programme, accelerated repex. SGN is required to replace all iron mains within 30 metres of property by 2032. The question that we talk about here is one of timing. Should SGN maintain a fixed profile, same amount of replacement each year from now to 2032, or do a bit more in GD2 and then ramp down gradually? Initially this programme was motivated by safety and mandated by the HSE, but it also has huge environmental impacts. Leakage accounts for 95 per cent of SGN's carbon footprint. When I sat in on some in-depth consumer research on SGN's environmental action plan, the overwhelming message was just fix leakage. We heard the same from sustainability experts who also talked about the value in getting the network hydrogen ready, and a wider stakeholder event that I sat in on, and Lucy sat in on the equivalent in Scotland, we badged this

as some exemplary research. As well as the environmental impacts, those other stakeholders were very focused on the practical benefits, that you ought to build in some contingency to a programme like this, as they said pressedly, you might get another foot and mouth outbreak. You should avoid contractors having you over a barrel as you get closer to your mandatory deadline. You want to avoid a cliff edge of work for contractors and you want to avoid having to dig up the road in the same neighbourhood more than once.

So, as a CEG, we saw this become a totemic issue for us. Obviously, the idea was proposed initially by SGN, but then they decided to take it out of their business plan in order to reduce the overall level of costs and we really pushed back and challenged them hard on that, looking at the stakeholder and consumer evidence that we had heard. They reinstated that, very much welcomed by us, but now Ofgem have rejected that proposal.

We're aware that Ofgem wants to get the HSE to review the obligation, but we feel we should plan for it on the basis that it is in law at the minute and there are reopeners to deal with the situation if that regime changes. This again, just to stress, is about when you do the work, not whether, in our view. Providing flexibility across price control periods would allow this work to be done as efficiently as possible and also to deliver environmental benefits.

Some of those same messages applied to proactive steel which we didn't look at as closely, but we urge Ofgem to consider carefully.

Can I have the next slide? It is about the overall carbon reduction impact which John touched on. Again, as I've said, customers were very keen on looking at the environmental impact and we're aware that SGN had a strong focus on net zero and hydrogen, but not on carbon savings in GD2. Customers expected them to be doing more in the short-term and to show leadership as an energy company about managing their carbon footprint. This chart shows the cumulative impact of all the different things in SGN's plan, delivering carbon reduction, and I would say we had to fight quite hard to get them to produce this composite picture and show how what they were doing was consistent with 2045 and science-based targets. We pressed SGN to do more on leakage, not just to rely on repex but to challenge themselves and what else could be done, for example, the proposals that John has mentioned that they did come forward with on innovative solutions for capturing gas from major leaks which Ofgem have rejected, although Akshay welcomely said you are looking at again.

We also pressed SGN to set more ambitious targets around biomethane injection and not constraining off injection in summer months, and Ofgem have not acknowledged SGN's ambition in this area and have actually rejected the inclusion of even a reputational metric in this space.

Overall, our concern is that while draft determinations might have delivered further cost savings for customers, it has reduced the amount of carbon savings that SGN

can expect to deliver which, as John has indicated, means that they would no longer be on track to hit the 2045 deadline set out in Scotland and their wider ambition.

The third area that I want to pick up on, the SIUs, I'll hand over to Lucy for because it is a purely Scottish issue.

LUCY McTERNAN: Thank you, Maxine. As Maxine said at the beginning, we are quite a large CEG committee and that was entirely to reflect the unusual footprint of SGN, the company having an area in the south east of England and here in Scotland. In fact, there are seven of us on the CEG who either live or work in Scotland, and that meant that from the very beginning the distinctiveness of the Scottish context was something that we took very seriously and wanted SGN to take very seriously as well. Yes, the distinct geography, distinct culture and very distinct politics, very different attitude to many of the issues at stake from the Scottish government. So we did press SGN to think about this from the very beginning of the business planning process, and I'm happy to say that we as a CEG were very satisfied that the business plan as submitted reflected the distinct Scottish dimension to the business that they undertake.

The SIUs are very much a case in point. SIU stands for Scottish Independent Undertaking, and they're basically standalone gas distribution networks, small scale, and five of them in very remote corners of our country, in Stornoway, Thurso, Wick, Oban and Campbeltown. We as a CEG looked into them with two considerations in mind. One was the overarching issue around remoteness and rurality in a country like Scotland – big policy agendas for the Scottish government to make sure that remote communities are served well – and the second, slightly different, was the, on the face of it, very large cost to customers for the benefit of quite small populations, small communities.

To look into it, we decided to visit and a small group of us went to Campbeltown and Mull of Kintyre, and it was an extremely worthwhile visit because we engaged with executives and engineers responsible for the facility and also with the local community. What struck us was not that just that these were very important services for some very peripheral communities, but also that there was a very important strategic opportunity for these SIUs. In conversation, we discussed ways that they might be used to trial new and innovative ways of distributing gas, the green gas agenda, and in the process of doing so reduce the need to truck LPG hundreds of miles across the country to serve those communities.

It would have been easy for the SGN exec and Board to ignore this very literally peripheral set of issues, but they didn't. They built into the business plan some interesting feasibility studies that would have used the opportunities that the SIUs represent. So, it is a little bit disheartening for us that they have been rolled back into business as usual in the draft determination, and I think the message here from Scotland is that the SIUs are an important and another totemic issue for us that it would be good to see Ofgem take another look at.

Back to you, Maxine.

MAXINE FRERK: Thank you. Just wrapping up and maybe my final slide if that can be moved on to, I'm aware we have talked about environmental issues primarily, but just to flag that we are – on vulnerability that was very much an important issue for us. We are in a slightly different position to other CEGs in that we hadn't particularly pressed for bespoke commitments in that area. SGN already had an ambitious target on fuel poverty network extensions. But we focused instead on ensuring that they had a robust process for deciding how the "use it or lose it" fund would be spent, using social return on investment to evaluate the impacts, focusing on doing more for those most in need, rather than spreading the help thinly, and that was based on strong feedback from a range of stakeholders.

So, for us the message is much more here on the detail of the rules as they are being developed to make sure that those don't get in the way of that focus that they wanted to give to how they would allocate their "use it or lose it" going forward.

Finally, coming to the overall balance of the package, we believe that SGN had got that balance right and their research supported that. Obviously, since then we're aware that COVID-19 has left a lot of customers really struggling, but in our view the answer to that is not to cut back on the outputs to try to deliver some short-term bill savings, but that help should be targeted, and we would support NEA's proposal for a larger "use it or lose it" pot in the light of COVID-19. For us, instead, the emphasis should be on a green recovery which stakeholders widely are talking about. This is really important and we believe should be a key consideration in Ofgem's final determination.

Thank you.

AKSHAY KAUL: Thank you, Maxine, and colleagues on the Customer Engagement Group for that very thoughtful and constructive critique of draft determinations and the areas that you would like to see some improvements in, including, as you mentioned, the accelerated repex programme, carbon reductions, the SIUs in Scotland and potentially a larger vulnerability allowance.

I'm now going to move on to invite Roger and Bob from the RIIO-2 Challenge Group to give their perspective, but before I do so, I just want to remind the audience that in about ten minutes we will move to Q&A and you can start putting in your observations or questions in the chat box on the side bar on the side of your screen.

Over to you, Roger.

ROGER WITCOMB: Thanks, Akshay. Good afternoon, everybody. I'm Roger Witcomb. I'm Chair of the RIIO-2 Challenge Group, which is a group set up by Ofgem, an independent group set up to challenge both the companies and Ofgem on RIIO-2 process and outputs, and I have with me Bob Hull. The Challenge Group consists of a dozen highly experienced, highly expert and very wise people, none of whom is shy, and Bob is one of those and will come in a bit later to talk about totex.

The first thing to say I think for us is that we thought that the SGN business plan was a very professional piece of work. It was very comprehensive and well-argued and well set out.

Concentrating really on high level issues, there was an awful lot of proposed outputs in the SGN plan, all of which looked entirely admirable but which came with rather a hefty price tag. The sad truth is that you really do have to do cost benefit analysis on virtually anything. If I'm being cynical, I'm not talking about SGN. Most companies will do anything you wish as long as they get paid for it. So the question really is: are these things worth it? That's an exercise which we strongly encouraged Ofgem to undertake. Indeed, we thought that several of the outputs proposed by SGN actually counted as business as usual and should not be funded at all out of anything other than their standard allowances.

That said, I have a lot of sympathy with the CEG in its belief – it's quite hard to see from the Ofgem draft determination how the input from the CEGs has been taken into account, and again we would encourage Ofgem when it comes to final determination really to set out where they have taken account of stakeholder engagement and customer views.

I think I will probably at that stage pass over to Bob. I said we thought it was a professional plan. You will have gathered from what I've said about outputs that to the extent that we take issue with it, it's over its costs, and these are rather large costs so I will pass over to Bob to talk about totex. Thanks, Bob.

ROBERT HULL: Thank you. I guess the first point is that we think it's really important that the minimum necessary baseline totex is set, taking account of all the evidence and the pressure on consumers and so on.

The current SGN performance during RIIO-1 is expected to underspend by 15 per cent over the entire period and by 18 per cent over the first six years. So, it is substantially below the forecast, and SGN are asking for a significant increase above that run rate for the next period. We thought there were a number of areas that really we invited Ofgem to examine further. One was the increase in repex and also things like business support costs were increasing at the same time.

John raised the point about our CBAs, and we really welcomed all the evidence and the work that SGN put into the different cost benefit assessments. But we think there were two factors that were not really taken into account. One was we thought some of the cost evidence could have been more independently assured, and encouraged Ofgem to take a look at some independent views on unit cost. The second was we didn't really think they took full account of the decreasing future network utilisation as customers start to use or are using less gas, continuing that trend, which could lead to obviously less need for maintenance expenditure, capex expenditure and also potentially reduce leakage as well. So all of those factors we felt were important to take into account, and we were a bit disappointed that SGN's

important project on realtime networks, which looks at this particular issue, hadn't delivered any results in time for this assessment.

Overall, we felt that the draft determination was about right, taking these factors into account, but very much welcome the approach that is being taken to look at any additional evidence that is presented for the final proposals.

ROGER WITCOMB: Thanks, Bob. So, two other quite large issues to end up with. One is the outperformance wedge, a somewhat controversial proposal by Ofgem. The fact is that if you look right the way across the universe of regulated utilities, not just energy but across water and other network monopolies, and not just in this country and not just over the last years of RIIO-1, regulated companies have outperformed their regulatory settlement on average by a significant amount, and that is not terribly surprising, come to think about it, there's an asymmetry of information, asymmetry of resource, one would expect that to happen. Not in the interests of consumers in any way at all. Good for shareholders, reflected in the fact that most quoted utilities trade at a significant premium to their asset value. So, what to do about it? That's something which has obviously exercised Ofgem a lot, and they have come up with the notion of an outperformance wedge, which is not the perfect answer to this question, we recognise that, but it's the best one that we can think of and would encourage everybody to try and think of a better one, but as long as that is the best one there is, then we will support it.

That's the outperformance wedge. The second one obviously is the rate of return to shareholders in the companies. We said in January in our final report that we thought that Ofgem's proposals then were about right, that the WACC was set at around the market level, pretty close to the market level, and we thought that every company then in this process was financeable. When we came to look at the draft determinations, which if anything were slightly more generous to the companies than what was in the original Ofgem proposals in methodology statement, we held to that position that the rates of return proposed looked right, proposed rates of return looked right, and that companies remained financeable. Since then, of course, we have had the CMA provisional decision on water company appeals, and there's been an awful lot of work done since then and there will continue to be an awful lot of work done going forward. All we've done, I have to say, is do the simple thing which is to go and ask some investors, not in this sector, not with an interest, and also advisers who sit on both sides of this particular transaction, what they thought, and so far – and it is early days – we have heard nothing which would cause us to change our views that what is in the draft determinations is appropriate and indeed financeable for companies in general and I have to say for SGN in particular.

So, that is where we are. No doubt there will be a lot more conversations, a lot more work, but that is where we sit at the moment. I think that's probably all I want to say at this stage. I know we're running a bit late so I'll stop there and see what questions there are.

AKSHAY KAUL: Thank you, Roger and Bob, for that. We have just about half an hour for questions now, and again to remind everyone, if you want to ask a question, please do so in the chat box on the side bar on the left of your screen.

Let me begin the questioning by inviting our CEO, Jonathan Brearley, to ask the first round of questions. Jonathan, please go ahead.

JONATHAN BREARLEY: Hello, John, and thank you for your presentation and all of your team's hard work leading up to this. I do acknowledge that we've been working very well together and look forward to working with you all as we get to final determinations, and hello to David as well, who I know from many other areas in the past.

What I would like to do is to lift this all up a bit out of the detail and just bring up some of the challenges that the Challenge Group have highlighted. To help me understand that first one that they mentioned, we are in a price control where you guys are expected to underspend by 15 per cent, more than that in the first six years, and yet you're asking for an increased run rate now to maintain the network at a reliable level. Can you help me understand that from a customer's perspective, who naturally as a regulator you would imagine we would have questions when we see those two things come up. Another thing I do want to acknowledge, because I know this was something that you guys did deliver, you did give some of that back in voluntary contributions. That doesn't change that strategic picture.

JOHN MOREA: Okay, thank you, Jonathan. So, I guess I would say that the price control settlement on GD1 is a game of two halves. You are quite right to say the first four years there was outperformance as innovation such as CISBOT, core and vac and many other innovations came to fruition that have flowed through into GD2. Yes, at half-time we, as you are well aware, gave £145m back to our customers. The second half of GD1 the cost base has increased significantly. The macro environment over the last few years, such as the Referendum and some interesting interventions by the HSE on welfare, etc, have put costs up. So, I think I would say that it's a game of two halves. We did give money back because of the outperformance in the first half. I would also say that we – I mean, part of the reason the run rate is up is because we've been asked to do more by our customers. So our customers have asked us to – they want us to deliver gas in a safe way. They want us to deliver gas on the coldest of cold days and we intend to keep doing that. They also want us to do, as Maxine mentioned, a lot more on the environment, so we put that in our plan as well.

I'm going to hand over to Mike Bedford to talk about totex in a bit more detail and then probably Paul Denniff will say his piece. Mike, have you got anything you want to add to what I've just said?

MIKE BEDFORD: Yes, thank you, John. I think I agree, we have seen a step change in performance in GD1 for some of the reasons you've outlined there. I think it is fair to say that we have built our GD2 business plan on that efficient

foundation that we have delivered in GD1, and for that point I think customers will benefit from that lower cost base and that outperformance that we have delivered.

I think it is important when we talk about performance to be very clear that we have delivered all our outputs in GD1 as well, and I think that is really important to make clear.

Going forward into GD2 and the totex, we have taken that efficient level forward. We have looked at productivity and we have challenged ourselves with ongoing productivity targets still in GD2, and I think looking at all the evidence we put forward and the evidence that has come from GD2, including work from Ofgem in the draft determination as well from their consultants, we think our productivity challenge sits very well within that range that's being put forward. We think we have built on that efficient platform in GD1 and we have taken that forward into GD2 to deliver a business plan that we believe delivers for our customers.

JOHN MOREA: Any of my colleagues got anything else they want to add? Paul?

PAUL DENNIFF: Good afternoon. I think when we look, Jonathan, at GD1, we had a very credible plan. We named a number of projects on our LTS and that was the start of our upgrade programme. This is based on solid proactive asset management. We put forward strong proposals on multi-occupancy building and that programme didn't come about post-Grenfell Tower, it was at the start, so I think when you look at GD1 and our approach, that is a continuation. We understand the assets we manage. We have developed the programmes bottom up. There was a conversation about cost confidence. We are confident in that. We brought an independent technical consultant in to challenge my asset engineers in the development of those programmes and named projects, and again there was another team to actually have a second line of assurance. So we had a very transparent and credible plan to submit, and our customers have actually stated to us they don't want us to defer. That increases risk. They want to maintain the network that is safe and reliable as it is today and, as John mentioned, at the back of February in 2018 when our networks nearly hit peak day demand, both our transmission system and our distribution system held up and delivered the gas when our customers needed it most. Thank you.

JOHN MOREA: Thank you, Paul. So you can see we're quite passionate about ensuring that the network is safe and resilient for our customers and making sure we deliver on the coldest of cold days. Jonathan, back to you.

JONATHAN BREARLEY: Thank you. I appreciate that and I think all of us should be rightly proud about the reliability of the gas network in general. John, just to clarify, are you saying with this game of two halves in GD1 that that 15 per cent underspend is no longer your expectation for GD1? I guess I still come back to the same question, that if it is, there or thereabouts, you had a credible plan in GD1, you're 15 per cent underspend towards the end of it, I'm agreeing with you that we have a reliable network that has delivered for customers, so it sort of begs the question for a regulator, as you can imagine, thinking about our statutory goal for

current and future consumers, that we should all be more ambitious than we were in GD1 on the level of efficiency that you guys need to deliver. Help me understand why that's not the case.

JOHN MOREA: Okay, thank you for that, Jonathan. Look, all we can do is – we've gone through a significant market-tested process with our contractors to actually get what we would deem the most efficient prices for the work that we intend to do going forward. So, I know that benchmarking models have thrown up stuff, but that theoretical stuff doesn't really reflect where we are in the market. We provided all that information to Ofgem, the tenders, and we've also provided all the way down to £½m the costs associated with our LTS system, the local transmission system. I think the stuff that you're putting in place on PCDs, NARMs and stuff, coming back to some of the conversations about the outperformance wedge and any outperformance, I think you will find that the stuff that has been put in place means that we're almost – it's going to be very difficult indeed to actually make any outperformance. As we look today at the settlement, we will overspend our totex because we're underfunded. All I can say is that the market has moved over the last few years, and that's why I was trying to say in the game of two halves. We have seen significant contractor pressures in the last three to four years in the south of England especially and in London especially, which is why we've passed you over the tenders for you to scrutinise. We also, whilst we were at it, got an independent company in called Hargreaves & Jones to actually verify that the procurement processes that we were doing were robust, and again we provided that report to yourself as well.

I don't know if, David, you've got anything to add?

DAVID HANDLEY: Thank you, John. I think, just to come back, yes, absolutely, I think one of the things in terms of the GD1 performance and why Jonathan can be comfortable that that's not going to be replicated in GD2 is because actually within GD1 we had a fundamental change in terms of the movement to totex. There are a whole bunch of very innovative structures and changes that we were able to make, low-hanging fruit effectively. In terms of things like live insertion, we went up from sort of 60 per cent insertion rates up to 90 per cent insertion rates now. We can't replicate that again. We're at 90 per cent, we can't go beyond 100 per cent and we actually can't go much beyond 90 per cent because of technical characteristics. Similarly, we've got innovation such as core and vac, so we're digging up less of the road space, which is creating less disruption for our customers. We're reducing the costs of actually doing that excavation work, but ultimately a hole is a hole, it can only get so small, we can't reduce the size of that hole any further.

So, a lot of these gains have had ongoing and enduring efficiency impacts. We've really taken the full advantage of all of the opportunities that are available to us in GD1, and that is shared with our customers, baked into our plans for GD2. As we move forward we are on to marginal gains and the efficiency improvement becomes much more incremental.

Thank you, John.

JOHN MOREA: Back to you, Jonathan.

JONATHAN BREARLEY: Thank you. Back to Akshay and then perhaps I'll pop in – I know Michael was going to ask on repex.

AKSHAY KAUL: Very good. Thank you. May I just remind our respondents to keep your answers precise and concise because otherwise we'll run out of time for questioning. Let me now invite Paul Grout, who is a Non-Executive Director on the Board of Ofgem, for the next round of questions. Paul, please go ahead.

PAUL GROUT: Good afternoon, everyone. I'm talking about hydrogen this afternoon and I do understand that proving the feasibility of converting gas networks to transport hydrogen would secure the long-term future of GDNs, but my question is, I guess, do you think it's fair that network customers should be shouldering a lot of the costs for this rather than your shareholders or even a larger share through tax-funded government schemes?

JOHN MOREA: Thank you for that question. I think the first thing I would say is that I bring it back to what our customers and stakeholders want and what we heard during our stakeholder workshops both in Scotland and England. I mean, there was a lot of excitement about getting to net zero and there are numerous ways that you can get to net zero as a country. You will have seen there's commentary on electrification, hydrogen, district heating. Actually, I think we need it all. I think over the last year, two years, I have been having conversations with the Energy Minister in Scotland and also over the last two months I have had three conversations with the Energy Minister in the UK about hydrogen. How do we get the thing produced? How do we get demand stimulated? And what is the string that holds it together? The string that actually holds it together is the network.

I think from a policy perspective, which is, I guess, one of the questions you're asking, who should pay, that's not something that I propose to answer today because I think that is a question for government, quite frankly, whether it is the network consumers or whether it's through general taxation. That is a bigger picture question. But do I believe the network can be transformed into hydrogen? The answer is yes. Do I think that hydrogen can and will be used for heating? I think the answer is yes. The H100 project, I sincerely hope that Ofgem give us the go-ahead for in November, will actually show for the first time hydrogen, 100 per cent hydrogen going through pipes into people's houses with hydrogen boilers so that people can actually feel zero carbon heat from an offshore wind turbine.

It is a complicated picture because it involves the network, it involves production, it involves demand, it involves other manufacturers. At the moment, yes, we are taking an industry position with other networks. We're trying to co-ordinate our efforts to minimise cost for network customers through something called Gas Goes Green. I know Ofgem are involved, I know that BEIS are involved, Scottish government are involved, but do I think it's important? Yes, I do. Who do I think

should pay? I think that's a policy decision. Of course, our shareholders through their investments will pay some as well because the equity that is in the business helps attract that long-term debt that is required to finance this going forward.

David, do you want to add anything to that? I think I've probably covered most. Sorry it wasn't succinct, but anyway.

AKSHAY KAUL: Paul, any further questions?

PAUL GROUT: This is a question actually I have been asked to ask on behalf of the NEA which is the following really. Since the start of the pandemic, what have you done to understand whether your customers' view on addressing affordability issues have changed?

JOHN MOREA: That's a good question and we've done a lot. I think probably Maureen is the best person to answer that. Maureen, would you like to answer that question, please.

MAUREEN McINTOSH: What we did and what we do is we listen to all our customers and our stakeholders. That's the way our company runs. That's the way, if you look at our business plan, we have sort of set our stall out, so it really, really matters to us what is important to our customers.

Throughout the last few years, and actually throughout GD1, we have carried out a lot of stakeholder engagement, we have had over 25,000 individual interactions to understand really what our customers' priorities are, what they think adds value to them. We do a lot of, as I say, different interactions. We do willing to pay studies, and before we finalised our business plan we done acceptability testing. We go out and ask our customers, "Actually when you look at our business plan, do you think that that is acceptable to you? Does it add value and, actually, is it affordable to you as well?" So, pre-COVID, when we done the first phase of this, our customers actually came back to us, whether they were informed or uninformed, and gave us really high scores, high up in the 80s. Now, we took the sort of way of working if you like, from the Consumer Council for Water because they're already experts in that area and they already carry it out. So their benchmark is round about 80 per cent. So actually our customers were really, really telling us that our plan was acceptable to them and it added value for money for them. But Covid then came along and we thought, okay, well, we need to go back out here and ask our customers, actually, is our plan still affordable? Is it still adding value to our customers? Have we got our priorities right? Actually, our customers come back with the same sort of high scores, didn't go down, they either stayed the same or they went up, with a view on actually excellent customer service being more of a priority for our customers in the south of England. So, to answer your question, absolutely, we went back and asked our customers, "Will our plan bring value for you, is it acceptable and is it affordable?" So, yes.

JOHN MOREA: Just to sum up, we have done acceptability testing both pre-Covid and post-Covid and used recognised metrics to do that and also consultants to do

that acceptability testing, and both have come back very high. So hopefully the NEA – I hope that answers that question.

AKSHAY KAUL: Thank you, John and Maureen. Let me turn next to Jessica Friend from the Ofgem finance team to ask a round of questions on finance. Jessica, please go ahead.

JESSICA FRIEND: Thank you for your presentation. You mention in the presentation that you don't consider the notional company to be financeable if the draft determinations were used. Then you focused on the recent CMA findings on cost of capital and you focused in particular on cost of equity and then you mentioned totex allowances. Is it cost of equity and totex allowances that you consider require changes to be financeable?

JOHN MOREA: I'm going to get Mike Bedford, who is our expert, to answer that question, but one thing just so you are aware, and I have spoken to Jonathan about this before, I will look at this in the round. What's particularly important to me is totex because genuinely our customers are talking about keeping that gas in the pipes when it should be in the pipes and keeping that gas flowing on the coldest of cold days. That's really, really important to me, but obviously to actually do all that we need to be able to be financeable, have good credit ratings and attract debt investment.

Mike, I'm going to pass over to you because I think you will probably give a more technical answer than that.

MIKE BEDFORD: Yes, thank you, John. Jessica, I think in answer to your question, we've set out our financeability position looking at the impact, as John said, of both totex and cost of capital. I'm not going to go into detail on the cost of equity point, I think that's probably been covered on various different forums, but suffice it to say we do believe that the cost of equity should be a lot higher than where you are at the moment. I think the CMA position has set out a position and I think, as John mentioned earlier, we believe, particularly for the risks that we face in gas, that the cost of equity should be higher than water. We've set out that position in our draft determination and clearly that is one angle that we believe is putting pressure on the notional company.

On cost of debt, we have put forward that we don't believe the cost of debt allowances at the moment cover some of the additional borrowing costs and some of the improved issue of costs in Scotland that we see.

On totex, I think that, as John said, is one area that we think is causing us some financeability, some big financeability concerns, and we undertook some detailed risk assessments. All that information is available in our draft determination response, and we looked at the plausible base case risk that was in totex, and that risk, and that was a base case risk, was causing us some significant issues in terms of our financeability. So, it is a collection of all the areas you've described, Jessica.

JOHN MOREA: Thank you for that, Mike. David, do you anything to add to that? No, okay. Hopefully that answered your question.

JESSICA FRIEND: Thank you. I will leave some time for some others to ask some questions.

AKSHAY KAUL: Thank you. I think we're running short. I just want to end with a final round of questions on what Maxine described as the totemic issue for the Customer Engagement Group. I think Roger and Bob also mentioned repex. It is one of the iconic issues in gas distribution, John, so if I could just invite Jonathan to ask a round of questions on that and then maybe I'll just add a supplementary before we move to closing remarks. Jonathan, please go ahead.

JONATHAN BREARLEY: John, you talked about repex and the need for additional repex. I guess I want to understand how that squares with two things. One is some of the level of uncertainty in the heat system overall, so what is the strategic option, and we, as you know, as a regulator fully support developing hydrogen, but I think we would all acknowledge there's a whole set of technical and wider questions to go through before the government could make a decision on that.

Secondly, I'd like to know how that fits with the cost deadline that we set, the cost benefit deadline we set for 2037. Overall, just give me a sense of – the third thing I would like to consider is just that point about lower utilisation of the network overall. Just tell me how the repex proposal at a high level fit with all of that and the HSE clearly may look at this, but tell me your views.

AKSHAY KAUL: I have a supplementary question before you respond. Investors have been telling us that some of them are worried about stranding on the gas network, stranding of the assets on the gas network, and obviously one of the ways to deal with that is to take care with the additional investment that goes in on the round. Could you just give us a sense of how your plan squares up with that aspect as well? Thank you.

JOHN MOREA: There's a lot of questions there in a very short space of time so let's see what we can do. I think Maxine, who presented after me, really hit the nail on the head. Repex, from my perspective, is all about a timing issue. At the moment there is an enforcement policy on the gas industry to replace all the pipes within 30 metres of a property over 30 years, and that ends in 2032. Actually, all we're doing with the accelerated repex that we proposed is actually bringing that time forward. The advantages of that are, as Maxine alluded to and as we've put in our presentation, that actually the methane that is released from our metallic pipes will get reduced, so therefore there's less carbon going in the atmosphere and of course methane is at least 20 times more carbon problematic than – well, than carbon. I think it's about a timing issue, pulling forward the replacement programme.

The other two things I would say is that we would be looking to try and do this extra repex in the first areas where we think that hydrogen would be suitable to come in. That would be on the east coast of Scotland but also in the south east where we

think that hydrogen can come in through the Isle of Grain, and potentially around the Southampton area where there's going to be an industrial cluster there which we will build hydrogen out from.

So, I think to me it's all about bringing forward things that we have to do anyway. The advantage of that is reduced carbon emissions effectively, and also it's giving us optionality going forward for cutting over hydrogen. The business plan that we put forward, if we can get all the R&D and all the great stuff that we have discussed about the reopeners and the strategic reopener, we have a vision of getting hydrogen down from St Fergus into Aberdeen and then running hydrogen down the east coast of Scotland, and we would really love to be in a place that we can do that in the early 2030s. That is why we would be looking at getting a lot of the repex replaced there.

I will pass over to Paul in a minute, but I just want to pick up the realtime networks question I think Akshay talked about. The report that is now with Ofgem shows that there is a small reduction in potential demand on some of the lower pressure pipes. What does that mean? That means that actually reinforcement that we may have needed to do as more people changed their boilers to combo boilers or more industry comes on line, we wouldn't need to do. What we proposed in our business plan was actually not an absolute allowance for reinforcement; we actually proposed a volume driver which would have taken into account – which is what we mention in our presentation. So, actually, we would only have to do reinforcement if it required it and there's a volume driver that means that, yes, if we need to do it we'll get paid, if we don't we don't get paid. So it takes it away from that ex ante allowance that currently is in there.

Paul, I can't remember all the questions that were thrown at me in a very short time, could you answer the ones that I haven't answered?

PAUL DENNIFF: No problem at all, John. Jonathan, we're actually seeing demand reduction and, as you know, we do the long-term development statement and our models are in line with one of National Grid's first scenario system transformation. Jonathan, it also aligns up to the recent Gas Goes Green ENA Navigant report.

Just touching on the realtime networks, that project has recently concluded, and what we see within that model, on the distribution system is some modelling, and I won't get too technical here but we use a demand derivation system and we're seeing that demand is at the diversification factor on the larger diameter pipes, particularly the 18 inch. Now, in our plan, Jonathan, we haven't submitted any investment proposals for large scale replacement. What we've done in GD1, and we brought the robots over from the USA, we have had six, we have refurbished those pipes. So what you see in our GD2 plan is minimum investment. We don't see a large impact on realtime networks, and that would only be if a company was proposing investment on those diameter of pipes.

That's that point. Just on repex, and John mentioned the 2032 for the tier one up to eight inch out to 2032, that 2032 when it was set in 2002 was based on

deliverability with the Health and Safety Executive, so it was a capacity to deliver those pipes. As John has mentioned, this is a timing issue, and what I'd just like to leave you with, Jonathan, this material is pretty unpredictable due to its carbon content and has been deemed unsuitable to transport natural gas. To date, we've had within SGN 743 gas in buildings from a fractured iron pipe, and they are a precursor to a potential incident gas explosion. So we do have to manage the safety of this network going forward. Thanks, John.

JOHN MOREA: Thank you, Paul. Any of my colleagues want to add anything to that?

AKSHAY KAUL: I think we're out of time, John, so we'll just go straight now to closing remarks. I'll hand back to Jonathan.

JONATHAN BREARLEY: Thank you and thank you to SGN and John and the team for all of your effort in terms of supporting the open hearings. Equally, thank you to the customer Challenge Groups and to the Ofgem team for setting this up. I know a huge amount of effort has gone into this public conversation. I would emphasise that these public conversations are important to us because we want to hear a wide range of feedback that comes into the price control because we acknowledge how important it is for customers and indeed for the UK economy. Equally, I want to say thank you to all of you who have come along today to give your feedback and thanks to everyone for all the effort that goes into the price control as a whole.

I want to reiterate a few things Martin said upfront. We do recognise that these price controls are fundamental to getting towards net zero, and the plans that we will put in place in December will make sure that we can hit our environmental goals as well as the goals we have for protecting customers today. Equally, I think that the strategic direction of these price controls has consensus, which is very simply lower returns, greater efficiency for companies, but we acknowledge that we will need greater investment to get towards net zero, and that's agreed I think between Ofgem and across the sector. Equally, I acknowledge that there is a difference in the extent of which these changes may play through.

I point to today's conversation. I want to start by saying thank you to John and equally acknowledging the voluntary contribution that SGN made as part of the RIIO-1 settlement. I do think there is consensus in a large number of areas. All of us want to see a safe, reliable and resilient network, and all of us want to get to net zero and have ambitions to get towards the net zero goal. I think we heard today that there is optimism that the reopeners that Ofgem has put in place will be a fundamental part of getting there.

Equally, there are some areas we need to work together, particularly in totex, so the revenue side, where we will have to work through the additional evidence on repex, noting the comments that the Challenge Group made around the overall cost. Equally, there is more to do on outputs and, as Akshay highlighted, particularly around the leakage, but again I point to the Challenge Group comments around the number of outputs that were there.

Finally, two other things. We will work together on supporting vulnerable customers, and all of us will work to shape those net zero reopeners to make sure they do their job, which is very simple, which allows us to make sure that spend is robust from a customer's perspective, both for the short-term and for getting to net zero, but equally, that the process itself doesn't become a blocker to the new investment we might need.

Clearly, there are going to be areas of further debate, particularly about round the scale and extent of any change in totex, the efficiency expectations we might have as part of that, and clearly there will be a continued debate about returns on finances, and I acknowledge the comments that SGN made but also those of the Challenge Group in that regard. Also, I just want to mention John's comment that they will look at this in the round when we look at the settlement as a whole.

Finally, just to mention these sessions are recorded and transcripts will be available at the end of the open series hearing and you will be given a link to a survey to give us feedback as to how they've gone. As we've mentioned, this series is the first series that Ofgem has attempted of carrying out this kind of public consultation and we would welcome feedback. Thanks again for everyone's efforts. Thanks for the attendees and all I need to do now is bring it to a close. Thank you.