

# **SHE TRANSMISSION STAKEHOLDER WORKSHOP**

**GLASGOW**

**NOVEMBER 2018**



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## INTRODUCTION

**On 28 November 2018, SHE Transmission hosted a stakeholder workshop aimed at gathering feedback from its stakeholders on the following topics: stakeholder engagement; sustainability initiatives; environmental initiatives; and their innovation strategy.**

The workshop took place at the 200 SVS conference and events centre in Glasgow. The event consisted of four presentations given by SHE Transmission representatives, each followed by round table discussions and electronic voting. There was also a presentation from a keynote speaker at the start of the day.

SHE Transmission instructed EQ Communications, a specialist stakeholder engagement consultancy, to independently facilitate the workshops and take notes of the comments made by stakeholders.

Every effort has been made to faithfully record the feedback given. In order to encourage candour and open debate, comments have not been ascribed to individuals. Instead, notes have been made of the type of organisation that each stakeholder represents.

The full presentation can be found [here](#), with the agenda for the day on slide 6.



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## EXECUTIVE SUMMARY

The workshop began with an introductory presentation from Dave Gardner, Director of Transmission at SHE Transmission. This was followed by a presentation from guest speaker Simon Gill, Energy Engineer at the Scottish Government.

## HOW WE ENGAGE WITH STAKEHOLDERS

The first feedback session started with a presentation by Christianna Logan, Networks Insights Manager. Her presentation covered SHE Transmission's current approach to stakeholder engagement as well as the proposed approach to engaging with stakeholders as part of RIIO-T2. After this presentation, stakeholders were asked to give their feedback based on their experience of working with SSEN and electronic voting took place. The key points raised by stakeholders were as follows:

- Stakeholders generally wished to be engaged at an early stage, certainly before decisions are taken. It was widely felt that engagement should only take place when there is real scope for SHE Transmission to change its business practices as a result and that, where this is not the case, engagement is seen as tokenistic.
- While there was support for SHE Transmission adopting similar engagement methods to those used by the water sector, it was felt that water companies are more comparable to electricity distribution companies in terms of the relationships they have with their customers. In comparison, most people have little knowledge about the role of a transmission company, meaning that more education is needed before people can participate with an informed perspective.
- When asked to vote electronically on how SHE Transmission should engage with end consumers, 69% felt that SHE Transmission should both engage directly with the end consumer and use representative groups.
- It was felt that SHE Transmission should hold more workshops across its network area, rather than just in Glasgow. It was also felt that topic-specific events should be held to get more informed feedback and that, in the future, a mapping exercise should be undertaken to ensure that the messages conveyed by SHE Transmission are appropriate for the audience.

## OUR SUSTAINABILITY INITIATIVES

The next session featured a presentation from Alex Sutton, Sustainability Manager, which was followed by another discussion session. The presentation covered three sections from the new Transmission Sustainability Strategy: 'Optimising Resources'; 'Mitigating Climate Change'; and 'Supporting Thriving Communities'. It also covered proposals for how to communicate the

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Sustainability Plan to stakeholders. After the discussion session that followed, there was a round of electronic voting. The key points raised by stakeholders were as follows:

- With regard to SHE Transmission's approach to 'optimising resources', stakeholders felt that the most important area was minimising waste, with 37% voting for this during the electronic voting. However, the other areas were also felt to be important, for example, there was a good deal of discussion on how the full life-cycle of a product ought to be considered. It was noted that although certain materials may in theory be cheaper and more 'suitable' if sourced from overseas, the carbon impact of these products could be greater than first thought.
- During the table discussions, stakeholders were asked which performance commitment they felt to be most important in each area. The voting results are as follows:
  - Minimising waste: stakeholders felt that 'reduce waste generated' was the most important commitment.
  - Reducing resource use: stakeholders felt that 'reduce material use' was most important, closely followed by 'reduce carbon content of construction projects'.
  - Promoting sustainable materials: stakeholders felt that 'life cycle assessments' was the most important performance commitment.
- Stakeholders were broadly of the view that SHE Transmission should focus on Scope 3 emissions. When stakeholders were asked how much emphasis should be placed on Scope 3 emissions during the electronic voting, they gave an average of 7.3 out of 10. It was added that this could be encouraged by emphasising sustainability when the company procures goods and services.
- Stakeholders were split on whether the resilience fund was an effective and appropriate way to support communities; when asked to vote electronically on whether it was effective, stakeholders appeared to be neutral, giving an average of 5 out of 10. Many felt that funds of this nature should be the responsibility of distribution companies and that money should instead be spent on improving SHE Transmission's infrastructure, as this would benefit certain communities.
- Stakeholders were asked to vote electronically on their preference for how SHE Transmission communicates its sustainability plan. The majority of stakeholders (44%) wanted a list of milestone targets, rather than a summary timeline or a narrative report.

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## OUR ENVIRONMENTAL INITIATIVES

The presentation on environmental initiatives was delivered by Richard Baldwin, Head of Environment at SSE. Richard presented SHE Transmission's current position in four areas before outlining the proposed position for RIIO-T2. The four areas were biodiversity; forestry and woodland; landscape and visual amenity; and oil management. The discussion session that followed included a facilitation prop to aid debate (see Appendix 1) and was followed by electronic voting. The key points raised by stakeholders were as follows:

- The majority of stakeholders felt that SHE Transmission's biodiversity targets do not go far enough and should go much further than planned in RIIO-T2. When asked to vote electronically on whether the future position should go further than planned (with 5 being 'should go as far as is planned' and 10 being 'should go even further than planned'), on average stakeholders voted 7.2 out of 10. It was suggested that the company should work in collaboration with relevant partner organisations in order to devise and implement more exacting targets.
- It was felt that SHE Transmission's planned approach to forestry and woodland should go further than planned, although not as far as biodiversity (on average, stakeholders voted 6.9 out of 10). However, there was some debate as to how this should be funded. It was also felt that appropriate monitoring should be in place, as some stakeholders were of the view that landowners would not always act responsibly even if they were being paid to do so.
- Although stakeholders were of the view that SHE Transmission's planned approach to landscape and visual amenity should go further than proposed (on average, stakeholders voted 6.2 out of 10), it was the lowest ranking out of the four areas. This is because it was felt that issues relating to aesthetics should not take precedence over certain other issues, such as customers living in fuel poverty. When asked whether they agreed that the scope of Ofgem's VISTA fund should be extended in the next price control, on average stakeholders felt that it should (with 7.3 out of 10) – and almost half (48%) strongly agreed, voting 10 out of 10.
- In general, attendees at the workshop felt that SHE Transmission's approach to oil management should go further than planned in the upcoming price review (on average, stakeholders voted 6.6 out of 10). It was added that the company has a responsibility to remediate contaminated land and that a review should be carried out to identify where land has been contaminated as a result of the company's operations, enabling the worst sites to be dealt with as soon as possible.

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## INNOVATION STRATEGY

David Paton, Technical Innovation Manager, delivered the presentation for the innovation strategy session. The presentation covered SHE Transmission's recent innovation activities, the development of the RIIO-T2 innovation strategy, and the proposed innovation principles and values as part of the new strategy. The discussion also included a facilitation prop to aid the conversation (see Appendix 1) and was followed by a final round of electronic voting. The key points raised by stakeholders were as follows:

- There was a good deal of support for Ofgem's proposed innovation reforms and it was felt that targets are most likely to be achieved through greater collaboration with third parties, including supply chain partners. It was, however, generally thought that innovation should not necessarily be funded as part of business-as-usual activities, as this may hinder its progress. This was reflected in the electronic voting, where in general stakeholders strongly agreed with 'increased third party involvement in network innovation projects', with an average score of 8.8 out of 10, but tended to disagree with 'fund majority innovation through business as usual' (4.7 out of 10).
- Although there was broad support for SHE Transmission's innovation values, this sentiment was not shared by all attendees. Some felt that the definition of innovation should be broadened and that the wider societal benefits of a low-carbon energy system should be included in this definition. This was reflected in the electronic voting, where stakeholders gave an average score of 6.1 out of 10 when asked how comfortable they were with the proposed innovation values.
- Stakeholders were of the view that greater competition could result in innovation being delivered in an efficient way, pointing out that improvements to innovation would also result in efficiency savings. It was, however, noted that issues relating to cost as well as regulatory standards could hinder progress in innovation.
- It was widely felt that SHE Transmission should do more to ensure that innovation is a core value that permeates through the company. Some commented that, in order to do this effectively, members of staff need to be properly trained and that the company should ensure that examples of best practice and learning from projects are widely shared to foster this culture.
- It was accepted that SHE Transmission needs to innovate and it was generally thought that 'transition to a low-carbon future' should be the primary aim in this (25% of stakeholders prioritised this theme over others in the electronic vote, giving it the highest share of the vote). However, it was noted that the fast pace of technological change poses certain risks. As a result, it was felt that the company should be cautious up to a point to ensure that customers' money is spent wisely.

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## AFTERNOON SESSIONS

After lunch, there was a Q&A with Dave Gardner, SHE Transmission, and Simon Gill, Scottish Government. The questions asked by stakeholders can be found in Appendix 2. This was followed by four expert surgeries, where SHE Transmission representatives hosted roundtable sessions on specific topics, including connections, innovation, environment and sustainability. The feedback from these sessions can be found in the 'Expert Surgery Sessions' section of this report.

## WRITTEN FEEDBACK

After the workshop, stakeholders were asked to complete a short feedback form. Some of the key findings are shown below:

- 41% of attendees reported that they found the workshop 'very interesting', with 52% opting for 'interesting'.
- 45% 'strongly agreed' that they had the opportunity to make their points and ask questions, with 55% 'agreeing'. None of the stakeholders disagreed or felt neutral.
- 62% 'agreed' or 'strongly agreed' that the right topics were covered for them on the day, and 57% thought the workshop venue was 'very good'.
- 68% thought EQ Communications' facilitation was 'very good', with 24% opting for 'good'. 88% of stakeholders indicated they would wish to receive invites to similar events in the future.



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## ATTENDEES

A total of 76 stakeholders attended the workshop, representing 53 organisations. The organisations represented on the day are shown below:

2050 Climate Group	Nexans
ABB	Octopus Investments
AMEY	Omexom
Balfour Beatty	Perth & Kinross Council
BAM Nuttall	PLPC
Baringa	Power System Partners Ltd
Coriolis Energy	Qmulus Ltd
Corrie Construction Ltd	RJ McLeod
Cyberhawk Innovations	RSPB Scotland
Electric Vehicle Association Scotland	Scottish Enterprise
Eneco UK	Scottish Environment Protection Agency
Energy Action Scotland	Scottish Fishermen's Federation
Energy Technology Partnership	Scottish Futures Trust
Energyline	Scottish Government
Falck Group	Scottish Water
Forsa Energy	Shetland Islands Council
Fred Olsen Renewables	Siemens
Friends of Loch Lomond and The Trossachs	SP Energy Networks
Infinergy	SSE Generation
Local Energy Scotland	Sweco UK
Loch Lomond & the Trossachs National Park	The Highland Council
LSTC	The Scottish White Fish Producers Association
Marine Scotland	Transport Scotland
Morgan Sindall	Vector Cuatro
National Grid	Viking Energy Shetland
Network Rail	Vinci Energies
	Wood AFW

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## WORKSHOP ONE: HOW WE ENGAGE WITH STAKEHOLDERS

### SUMMARY

In order for SHE Transmission to better understand the needs of its stakeholders, it was felt that a mapping and categorisation exercise should be undertaken to give insight into the issues that are relevant for each stakeholder group, with messages tailored accordingly. It was added, however, that there is a limit to the amount of information that can be garnered from desk-based research alone, and that there is no substitute for face-to-face meetings and workshops. As a general rule, most stakeholders felt that engagement should take place at the earliest possible stage. It was felt that the company should roll out a programme of topic-specific workshops or forums to engage with key stakeholders on the issues that matter most to them. SSEN Distribution's connections forum was cited as a good example of this.

It was commented that the company should reach out to its stakeholders by hosting meetings and workshops in different locations across its network area, rather than just in Glasgow. It was felt that ScottishPower Transmission has more visibility in Scotland and that the company is better at tailoring its engagement according to different stakeholder audiences. UK Power Networks was also cited as a company that is good at involving stakeholders at an early stage; it was also singled out for its transparency with regard to costs.

There was a general feeling that more meaningful engagement, especially with end users, will only be possible when people have more knowledge of SHE Transmission's role. There is clearly some confusion among stakeholders and end users over the difference between transmission and distribution; an issue that is exacerbated by the complicated structure of SSE. It was felt that better education and more information on how transmission interacts with distribution and the wider SSE Group would be helpful and would inevitably lead to more engagement. It was added that SHE Transmission should do more to raise awareness of its investment programme to give people a better idea of how customers' money is spent.

Although it was felt that there are lessons to be learnt from the water industry in terms of how SHE Transmission should engage with its stakeholders, it was commented that end users are more likely to understand the role of a water company because of the relationship it has with consumers, and that this role is, in fact, more similar to distribution than transmission. It was, however, noted that, without full knowledge of the facts, end users may be more likely to make judgements based on emotion rather than economic reality; the point being that companies should only engage on topics where there is real scope for change. In terms of specific examples of good practice from water companies, their use of consumer surveys and citizens' panels were seen as good initiatives to replicate.

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When asked to vote on how SHE Transmission should engage with end consumers, over two thirds (69%) wanted to see a combination of direct engagement and engagement via representative groups. It was noted that energy networks should work collaboratively so that consumers' views on the wider energy mix are taken into consideration.

Although there was a general sentiment that SHE Transmission should engage more widely, it was felt that it is not necessarily appropriate to discuss bills with end users, as many have little knowledge of how their bills are split between supply, distribution and transmission. It was added that consideration should be given to how different age groups consume information; younger audiences prefer shorter communications as opposed to highly detailed documents.

### **1. How can SHE Transmission better understand the expectations of all of their key stakeholders?**

- “These meetings are really good. We have follow-up meetings with SSEN and stakeholders at an environmental steering group. They are helpful. It's a difficult task but it's worth it.” Environmental group representative
- “We don't know what's going on in individual regional areas.” Infrastructure / engineering representative
- “We want to be involved early when we engage with you, rather than later down the line when a preferred option has been decided. We are getting consulted, but it would be preferable to consult us even earlier, potentially before a wider consultation.” Environmental group representative
- “I value how SSE treat us as a member of the supply chain. We have a long-standing relationship that has benefits for both parties and the client. Strategic relationships are good, but it needs to not be just talk. Things need to be put into action.” Infrastructure / engineering representative
- “There are huge challenges coming. There has to be a strategic conversation based on what is achievable and what the risk profile looks like; decision making is going to be much more important; we need to know a lot more about different segments of consumers. The more that we can collectively engage the public, the better.” Government / government body representative
- “You should do more mapping and categorising of different groups. And then tailor your approach accordingly.” Voluntary sector representative
- “Can I just say, I don't like the word ‘consumers’; ‘customers’ is better. ‘Consumer’ is too passive.” Infrastructure / engineering representative
- “It's really useful to have an event like this. You get a broad range of feedback, so, for example, you have the developers stressing about outages, then business suppliers

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wondering about the market, etc. Having more targeted ones with, for instance, just developers or just generators would be good, too.” Business representative

- “The focused workshops [run by ScottishPower] help tremendously, you can air your grievances. It’s quite handy when you’ve all had similar issues.” Developer / connections representative
- “Maybe you could team up with suppliers to get information out there to people. If you do this, you’ll improve the level of knowledge among users, which would improve engagement.” Environmental group representative
- “You need to widen your audience and the only way to do it is to go to end users and get them engaged.” Business representative
- “There’s a lot in the press talking about the costs being too high, but people don’t appreciate what they have.” Infrastructure / engineering representative
- “It’s not easy and it’s a bit time consuming and impersonal for us to spend time emailing, so it’s better to have this kind of workshop. It’s interactive and we are able to contribute. It feels like genuine engagement.” Infrastructure / engineering representative
- “You should run focus groups or mini workshops, focused on specific topic areas.” Business representative
- “A more personal touch is always welcome.” Infrastructure / engineering representative
- “There are too many emails and often important things can be mistaken for junk.” Government / government body representative
- “When people have an interest, it’s easier. It’s harder to engage the general public.” Government / government body representative
- “The receptors, or triggers, of your stakeholders have to be understood. You need to understand what makes the different groups tick.” Infrastructure / engineering representative
- “I think it’s all very complicated. You complicate matters by being SSE, SHE Transmission, SSEN, etc. The customer is then instantly disengaged. Could you bring the whole lot together? The thing about water is that everyone gets it.” Infrastructure / engineering representative

## **2. Do you think that lessons from the water sector are applicable for electricity transmission networks?**

- “There are things like citizens’ juries and panels where they get a cross section of consumers. This is similar to enhanced engagement but with consumers. It might be

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the only way to get end consumers to understand enough to contribute.” Government / government body representative

- “It’s difficult. It isn’t appropriate for Transmission to engage with consumers, but it is essential to recognise their needs. Engaging in debate about energy costs and with Citizens Advice is good, but it’s important not to engage directly [with consumers].” Developer / connections representative
- “Just to play devil’s advocate, in the water industry, when we asked customers where they thought we should invest, they emotionalise and say we should do this and that, but the science doesn’t support what they wanted. For example, sewage and flooding of housing was a big issue for customers, but our models had shown we couldn’t reduce it any more. But because customers said that it’s really ugly, we’d taken it on board and dealt with the easy wins instead. But the customers insisted on it, so we looked at it again.” Energy / utility company
- “In the last investment period they had customer forums supported by a sophisticated marketing strategy. We took a lead from them and it contributed to our investment plan.” Energy / utility company
- “The lessons from the water sector are applicable to SHE Transmission as they are a utility. They’re a throwback from the government of the time privatising the sector.” Developer / connections representative
- “I totally agree. There was arrogance before. A feeling that they didn’t have to consult, but it’s all been turned on its head with the rise of renewables, etc.” Developer / connections representative
- “Scottish Water have been a bit better in terms of their outreach and are more visible in getting themselves out there and supporting an educational approach among end users.” Environmental group representative
- “There are a number of different methods of engaging and different media that SHE Transmission should use. You find a lot of kids on social media, but are you doing that?” Infrastructure / engineering representative
- “The water sector is different to transmission. In terms of the things they do in many areas, they are more similar to SSEN distribution.” Infrastructure / engineering representative
- “In Edinburgh, they had a nine-month engagement programme for a water treatment works. It freed up land for new housing. So you have that level of engagement.” Business representative

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- “It’s very different. The water industry is very vertical, from source to consumer, but electricity transmission is very removed from the customer, so there’s not a direct correlation. You’re feeding through the distribution system.” Business representative
  - “It’s important for SSE to reach out to the community; they need to keep this up with open meetings in the evening.” Local authority officer
  - “Water has a direct relationship with the customer. SSE Transmission has a distribution business in between, so it’s not the same relationship. Only people in the industry see the difference. It’s three organisations with three objectives.” Developer / connections representative

### **3. Are there other industries or organisations that we should look at for best practice guidance?**

- “UK Power Networks are involved in talking about costs and other things at an early stage. That makes a real difference.” Infrastructure / engineering representative
- “Local Energy Scotland are very engaged in learning about the future and their own vision for local energy systems.” Government / government body representative
- “I wouldn’t underestimate the size of the ‘not engaged’ box. How you engage with those who don’t want to engage is very important.” Infrastructure / engineering representative
- “Wind farm developers are a good sector to look at. Any site above 50 MW, we have to do customer engagement and updates.” Developer / connections representative
- “I hate to say it, but I feel like I see more from ScottishPower. I know that more people are being served by it here in Glasgow.” Environmental group representative
- “SSEN should look to move further afield with workshops like these, rather than just going to Glasgow.” Developer / connections representative
- “Lessons can be taken from any industry and tailored. You should take as many ideas as you can.” Infrastructure / engineering representative
- “I think ScottishPower have been doing something that has really helped. They run a forum like this one today, but specifically focused on generators. You get a chance to talk to them. SSEN Distribution do that as well. Generators get a chance to talk about what’s happening. You should do something similar.” Developer / connections representative
- “I think one of the observations I have from working with ScottishPower Transmission is that they tailor the conversation, making it specific. Access to their organisation and being able to find the right person to speak to is also really good.” Voluntary sector representative

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- “SHE Transmission is in the community. There is engagement, but you look at a lot of things and it seems like decisions have already been made by the time they consult.” Infrastructure / engineering representative

#### **4. On what topics should SHE Transmission look to include the views of end consumers?**

- “There needs to be a level of education and I think that’s what is missing. Talking to households so they actually understand the system. Talk to most households and they won’t understand.” Developer / connections representative
- “I think we hear a lot about energy in the news and media. There’s definitely a trust issue here and a lot of it is because people see suppliers raising their prices. You need to think about building trust. If you’re spending £1 billion, you need to explain where it’s going.” Energy / utility company
- “I don’t know whether you should be consulting on billing, as the level of knowledge is not high enough among end users to talk to them about it. It’s a huge challenge and there are better things to focus on.” Developer / connections representative
- “You need a better explanation of the economic reasons for installing assets or investing in other areas, or else it could look like you’re acting for your own benefit.” Environmental group representative
- “I agree about this. There are a lot of social reasons for why they’re doing what they’re doing. You need to tell the story clearly.” Infrastructure / engineering representative
- “We need to inform and engage with the customer by letting them know what they are paying for and explaining why their bill is going up.” Developer / connections representative
- “For me, it would be nice to see a breakdown of costs so I can see how the money is being spent.” Infrastructure / engineering representative
- “Ofgem are very keen to look at the whole energy system, and it’s really important to have a plan on that. The government’s idea of connecting renewable energy is the right thing to do, but there has to be a plan. It’s about combining references so that information flows between departments and sectors.” Voluntary sector representative
- “There are third parties involved like Ofgem and National Grid that need to communicate more. We have conversations and regular contact with National Grid and SHE Transmission but the regulator has very limited communication. I don’t know how that can be improved. Some independent oversight is good, but I’d say the level of communication from Ofgem is poor.” Developer / connections representative

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- “I would agree. To be fair to Ofgem, I think they do recognise that as well. In the last year I’ve seen a change. They are using social media and there is more regular communication.” Voluntary sector representative
  - “I think the majority of people don’t understand how distribution and transmission work. Only a small proportion of the population understands or cares.” Developer / connections representative
  - “Statistics showing network reliability locally would be helpful to inform end consumers.” Developer / connections representative
  - “Stakeholder engagement with the end consumer is the responsibility of the distribution business.” Developer / connections representative

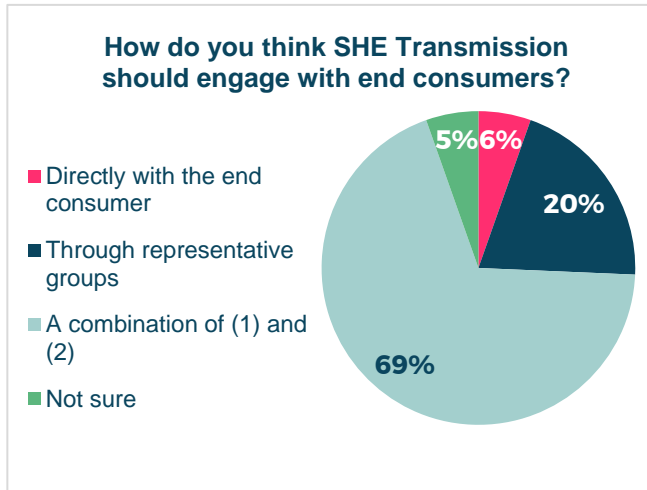
## **5. How can SHE Transmission ensure that the interests of future consumers are considered?**

- “You should get into education, then you can get access to people at an early age.” Infrastructure / engineering representative
- “With Transport Scotland we have the A9 Academy. We’re getting into schools and engaging.” Government / government body representative
- “Schools do not understand the concept that we’re all talking about; they also haven’t thought about how electric vehicles will be changing things in the future.” Government / government body representative
- “A talk in her school inspired my daughter to become an engineer.” Government / government body representative
- “Maybe use adverts and focus on easier communication rather than sending out heavy, fact-filled documents.” Infrastructure / engineering representative
- “Looking at the behaviours of generation X and millennials should inform what you do. Research indicates that the younger generation wants snappy, short bursts of information. All those round this table will change in 20 years’ time. So we need to plan now for that eventuality.” Voluntary sector representative
- “When it comes to consultation with the end user, maybe distribution and transmission should be working together.” Business representative
- “And if you take that view, you need National Grid in the room at the same time.” Business representative



- “The youth will be the future user, but statistics show that the majority of millennials don’t have driving licences, so maybe engaging on EVs isn’t all that relevant. There’s also a move among people in cities where you won’t have car ownership.” Business representative

- “What’s SSE’s motivation for involving the end consumer? What value does it hold for them other than a tokenistic one?” Environmental group representative
- “They are incentivised legally to [involve the end consumer] by Ofgem and there’s an incentive for this, so it has to be done. It just has to be done better.” Developer / connections representative



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## WORKSHOP TWO: OUR SUSTAINABILITY INITIATIVES

### SUMMARY

#### Optimising Resources

In terms of 'minimising waste', most stakeholders thought that the most important performance commitment was reducing waste generated, as it was felt this would have a knock-on effect on all other commitments. Several developers and infrastructure / engineering representatives raised the point that SHE Transmission need to challenge their own design parameters if they want to reduce waste because the amount of waste generated is the consequence of the design of a scheme.

Stakeholders generally felt that all the proposed commitments were important and that SHE Transmission should be addressing them all. The importance of reducing plastic waste was raised by several stakeholders. One stakeholder did question the definition of 'waste' given that some of what is defined as 'waste' can be recycled.

When stakeholders were asked whether there were any target areas missing, 'reusing waste' was suggested as an additional performance commitment.

Under 'reducing resource use', stakeholders were generally split between 'reduce material use' and 'reduce carbon content of construction projects'. Reducing carbon content was felt to be important as it is about the whole life cycle of the project. It was noted that importing fewer materials from abroad would lead to a carbon reduction but would also mean higher costs. Some felt that reducing material use could be an easy win and that there was the potential to work collaboratively with suppliers on construction projects. It was also felt that SSEN should innovate more and look to use more sustainable materials. Stakeholders gave the example of lead being used in cables.

When asked whether there were any target areas missing, stakeholders suggested 'electric vehicle fleets' as well as 'embedded generation', i.e. the use of low carbon technologies to generate power.

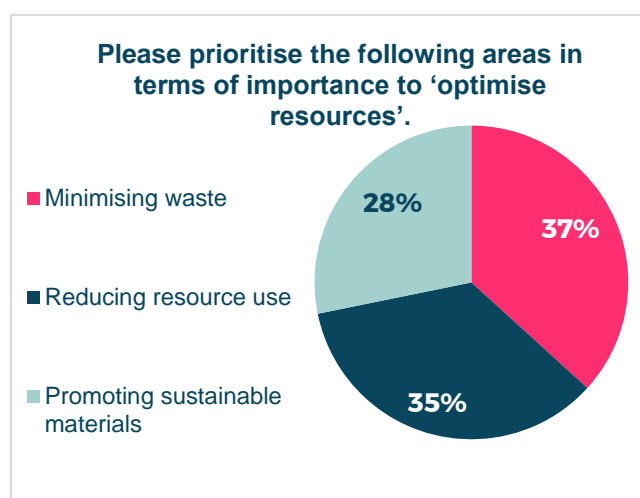
Under 'promoting sustainable materials', stakeholders generally said that 'life cycle assessments' were the most important performance commitment. It was felt that, as a country, we were behind the curve with this, but that the supply chain was starting to think in that way. The responsible sourcing of assets was regarded as important for both environmental and ethical reasons. One stakeholder gave the example of a project where they were recycling metals for their own cables. However, the implication on cost was raised by many stakeholders, some of whom pointed out that SHE Transmission's procurement process would

need to help drive change. Stakeholders once again pointed to the importance of early engagement in this area, particularly around project design.

When asked to provide any missing target areas, stakeholders suggested 'innovative materials and technology'.

Concern was raised about the overall impact of optimising resources on customer bills.

When asked to vote electronically on which overall area was most important to help optimise resources, the most prevalent answer given (37%) was 'minimising waste', although the fact that stakeholders were fairly evenly split reveals that all areas were seen as a priority.

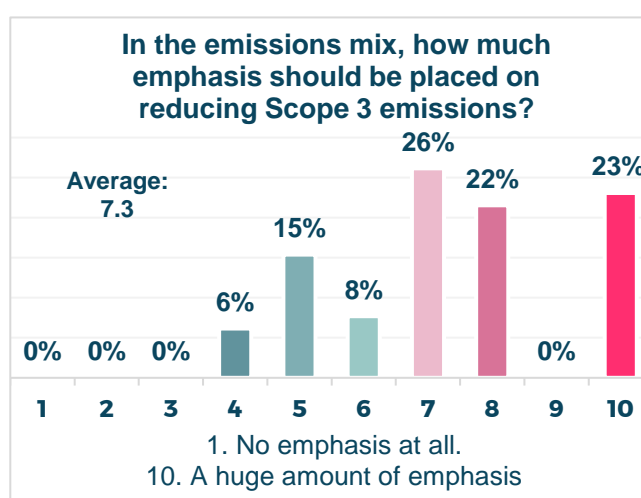


## Mitigating Climate Change

It was felt that a considerable amount of emphasis should be placed on reducing Scope 3 emissions compared to Scopes 1 and 2, particularly given the scales involved. That said, it was felt that electrical losses were not under SHE Transmission's control to the same extent, so it was easier to reduce emissions from business transport.

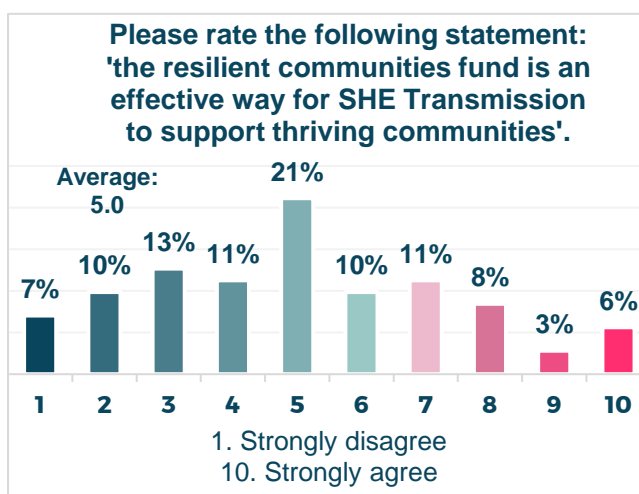
It was felt that a reduction in Scope 3 emissions was within SHE Transmission's control as it could be covered under responsible procurement. This should include using local suppliers rather than always simply choosing the lowest cost option. It was added that greater collaboration with suppliers would be necessary and that sustainability ought to be an important criterion when selecting suppliers. The point was made that if SHE Transmission promoted sustainability and innovation to its supply chain, it may even encourage younger people to work in the sector.

When asked to specify how much emphasis should be placed on Scope 3 emissions on a scale of 1 to 10 (1 being no emphasis at all), on average stakeholders voted 7.3. In fact, almost one quarter (23%) voted '10', meaning they wanted to see a huge amount of emphasis placed on this area.



## Supporting Thriving Communities

Stakeholders were split as to whether the fund was an effective way for SHE Transmission to support thriving communities. When asked to rank on a scale of 1 to 10 how strongly they agreed or disagreed with the fund, the most popular answer was '5 – neutral' (21%), but stakeholders were entirely divided, with every option between 1 and 10 receiving at least one vote.



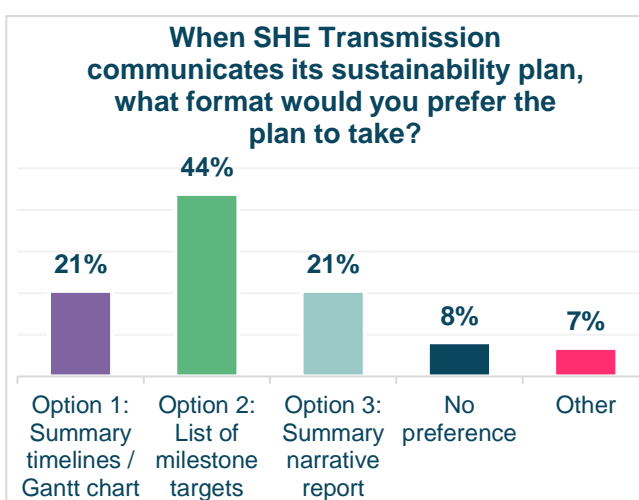
Some stakeholders recognised that the fund could have some real value and felt that it was important for SHE Transmission to give back to communities.

However, some questioned whether this was an appropriate initiative for a transmission company, with some stakeholders feeling it was more appropriate for distribution or should fall to emergency services and first responders. Some wanted the money to be spent on improving infrastructure or supporting the energy efficiency of local communities instead.

There was concern that only prosperous and organised communities would apply for the fund, and it was felt that SHE Transmission should provide support with applications and better promote the fund. Several stakeholders said that the fund needed to be rebranded as it isn't clear enough.

## Communicating the Sustainability Plan

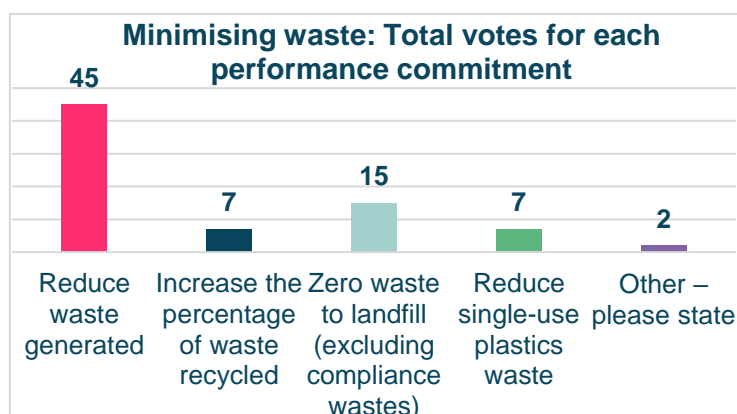
Stakeholders were asked to vote electronically to indicate their preference for how SHE Transmission should communicate its sustainability plan. With



44% of the votes, the most popular option was a list of milestone targets, rather than a summary timeline or a narrative report.

## 1. What performance commitments should SHE Transmission prioritise for ‘minimising waste’ – is anything missing?

In the table exercise, when asked to vote for the most important performance commitment for ‘minimising waste’, stakeholders voted overwhelmingly for ‘reduce waste generated’. This was followed by ‘zero waste to landfill’. A graph summarising the results can be found to the right.

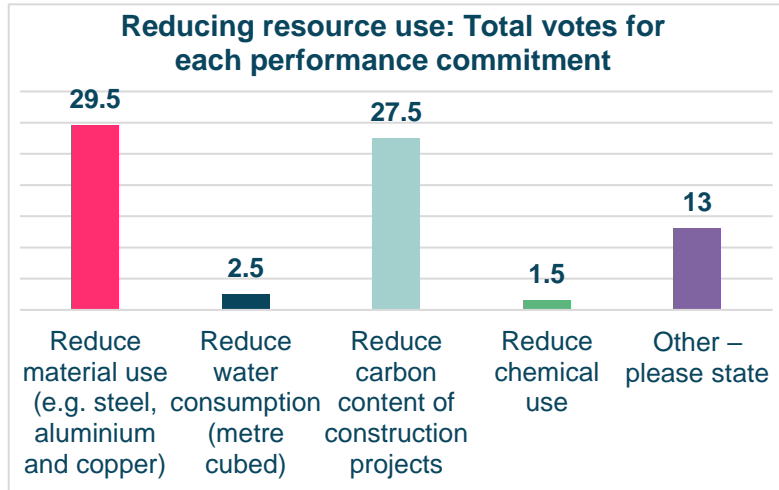


- “You should look to reduce waste before you focus on recycling.” Energy / utility company
- “Waste reduction is the primary thing since if you can reduce the waste generated, you can also decrease the number of vehicle movements, which impacts your carbon footprint.” Environmental group representative
- “Reducing the use of plastics is a major priority.” Developer / connections representative
- “Much of the waste generated comes from third parties – your supply chain – so what impact can you have on that?” Infrastructure / engineering representative
- “Recycling is important.” Developer / connections representative
- “Add in a category – all of the above!” Business representative
- “The only other thing is, to reduce waste generated, everyone thinks of plastic and things like that, but there’s energy waste in the networks too; it can be up to 80% in the older generators.” Developer / connections representative
- “I would prioritise ‘reducing waste’ because it would enable you to become more effective in your other commitments in this area.” Infrastructure / engineering representative
- “I’m torn between recycling and reducing waste generated, but I feel like reducing waste generated would cover more.” Developer / connections representative
- “Reusing waste is missing on these sections.” Local authority officer
- “‘Zero waste to landfill’ needs a better definition. What is waste? There is also a means of recycling material – you have to go through processes to realise what waste is.” Infrastructure / engineering representative
- “Is there any reason we can’t do all of these?” Business representative

- “If SSEN wants to be more sustainable, they need to challenge their design parameters. They design in unnecessary factors that involve waste. The extremes of their design specs lead to issues for projects.” Developer / connections representative

## 2. What performance commitments should SHE Transmission prioritise for ‘reducing resource use’ – is anything missing?

In the table exercise, when asked to vote for the most important performance commitment for ‘reducing resource use’, stakeholders were split between ‘reduce material use’ and ‘reduce carbon content of construction projects’. A graph summarising the results is provided.



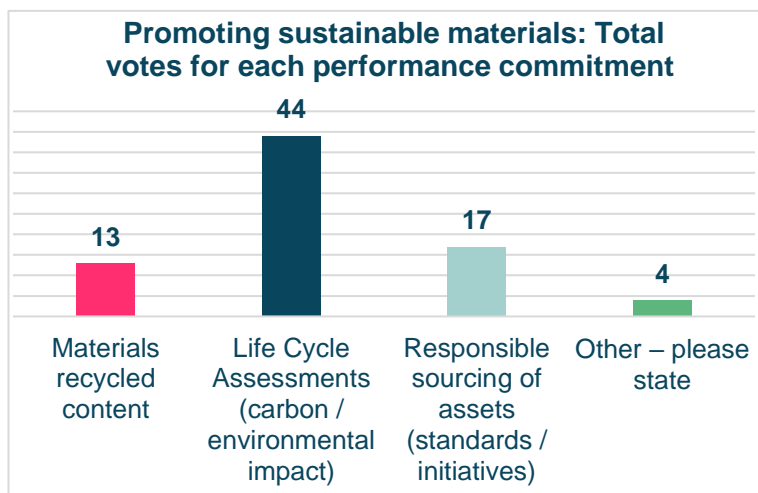
- “We’ve done a lot to reduce the consumption of materials, but materials from China add to carbon.” Infrastructure / engineering representative
- “If you reduce material, you reduce carbon. They maybe don’t all interlink, but some of these do.” Environmental group representative
- “What’s the appetite, lower cost or reduced carbon? We could go to Korea, for example, for lower cost. We can buy cheaper steel from Turkey, but carbon isn’t accounted for.” Developer / connections representative
- “I’ll go with carbon because it’s affecting life cycle.” Developer / connections representative
- “There’s a huge number of people operating on-site; if that can be taken into controlled environments, production off-site would be more efficient.” Infrastructure / engineering representative
- “Reuse more, rather than reduce.” Developer / connections representative
- “My main one would be to reduce material usage. We use a lot of technologies or cable materials that are not up to scratch. SSE are slightly conservative. We still use lead, and we don’t want to be using that at all. Most of our customers don’t use it at all, but SSE insist on it. We don’t need lead at all.” Infrastructure / engineering representative



- “The carbon one’s difficult, because it’s at every level. I used to work on the diesel generation side, and everyone uses steel and concrete in their construction. It’s not the carbon used in transmission, it’s the carbon used after that. It’s the life cycle.” Developer / connections representative
- “Carbon content is my priority because the carbon life cycle has the biggest impact in the construction phase.” Developer / connections representative
- “I would prioritise construction projects: this is where a lot of their resources are used and it has a bearing on whether a project is carbon intensive.” Business representative
- “As a manufacturer, we need to look at reducing the amount of materials we use. To me there is real potential here for us to work together.” Infrastructure / engineering representative
- “Early engagement in the process. Seek solutions from the outset and value that as much as possible in the earlier stages so that the right contractor is selected.” Infrastructure / engineering representative
- “The trouble is, it is difficult to measure carbon, whether it’s vehicles or producing a cable; it’s tricky.” Infrastructure / engineering representative
- “Metal use is definitely more measurable.” Developer / connections representative
- “Driving to meetings is an issue in terms of carbon use.” Developer / connections representative
- “Constant innovation. Lead cables, aluminium, and moving forward on those that are lighter. You can get a larger area through this. A 1,000-metre cable made of aluminium is lighter, and the cost is 15, 20,000. You’re halving that cost even before you transport.” Infrastructure / engineering representative

### 3. What performance commitments should SHE Transmission prioritise for ‘promoting sustainable materials’ – is anything missing?

In the table exercise, when asked to vote for the most important performance commitment for ‘promoting sustainable materials’, stakeholders felt strongly that ‘Life Cycle Assessments’ was the most important performance target. A graph summarising the results is provided.



- 
- “It is a lot cheaper to source materials abroad.” Developer / connections representative
  - “The value of using materials sourced from UK business isn’t recognised enough.” Developer / connections representative
  - “We’re having to reduce costs, certainly on the renewable side, because there’s no subsidy to get wind farms operational. We need to get the cheapest.” Developer / connections representative
  - “The life-cycle aspect of project design has an opportunity for improvement. It is challenging, but it is an area that would lead to other benefits.” Developer / connections representative
  - “I think responsible sourcing of assets, not just from an environmental standpoint, but an ethical one too. There’s a lot of stuff coming in from copper mines in China that people don’t want to know about, but it’s a serious issue.” Developer / connections representative
  - “The life-cycle assessment is linked to carbon. If we looked at life cycle, we’d all be using wind energy.” Developer / connections representative
  - “I’m torn between life-cycle assessments and obtaining responsible equipment. We don’t think about equipment sourced from foreign countries, which could be incredibly polluting.” Infrastructure / engineering representative
  - “As a country, our uptake in this area is very slow in comparison to other countries.” Infrastructure / engineering representative
  - “We are looking at cable manufacturing and have started our own recycling plant as we are very keen on making sure we have a life cycle for our products. We want to make sure it is recycled and not just sent into the scrapyard. Copper is typically sent somewhere that isn’t necessarily back into the industry.” Infrastructure / engineering representative
  - “Early engagement in terms of design. For example, we should just get rid of lead, which would be one big win in terms of cable projects. It would tick a few of these boxes; less waste, sustainable material.” Infrastructure / engineering representative
  - “In the supply chain, SSE’s procurement practices are based on lowest cost rather than sustainability.” Developer / connections representative
  - “If you look at KPIs, generally, the environment is always one out of 40. So maybe you put three or four, as you’ll drive a different behaviour. Environmental initiatives.” Infrastructure / engineering representative
  - “Maybe it’s more on the design itself; we could design a system that considers the fact that we build wind farms, and in 20 to 30 years we may have to dismantle that, so we need to think about the full life cycle of this.” Infrastructure / engineering representative

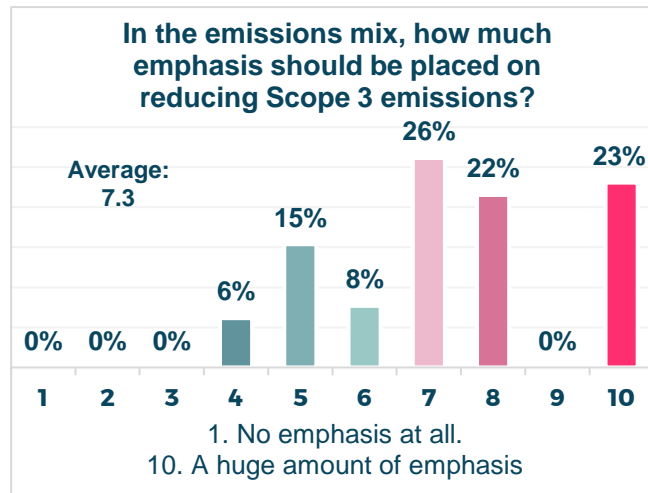


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#### 4. How much emphasis should SHE Transmission put on reducing Scope 3 emissions?

- “We are investing a huge amount of money in being carbon neutral, but of course there is a cost.” Developer / connections representative
- “It takes a long time to work and engage with suppliers. It takes a long time to develop. If you’re thinking about 2050 – we need to think about that now, otherwise our future assets are linked in with carbon.” Energy / utility company
- “Business transport is small compared with electrical losses and other emissions. But the losses are less within your control.” Government / government body representative
- “As a business we have more and more vehicles doing more miles every year. There are less guys per van for welfare reasons, so there are more vans going to the same job. Every year there are more vehicles.” Infrastructure / engineering representative
- “Remote farms mean that mileage may go up. Can we encourage electric vehicles for the supply chain?” Developer / connections representative
- “Scopes 1 and 2 should be a priority. Vehicles, lighting in buildings – it is easier to bring those down and monitor. Get your own house in order first.” Local authority officer
- “Scope 3 is the biggest element. Why did it more than double? It’s massive according to the figures. More than three times more than everything combined, so it should be a priority.” Government / government body representative
- “Scope 3 emissions should be covered under responsible procurement.” Developer / connections representative
- “It’s important for a company like SHE Transmission to promote that type of mentality for the younger generation. In this industry there’s a perception that there’s a skills gap, whereas if you promote yourself as an environmentally friendly, innovative company, you can invite new skills in, get the younger generation interested in this type of work.” Infrastructure / engineering representative
- “If you reduce carbon, then you’re promoting yourselves as a modern, forward-looking company. It’s about the message you’re putting out.” Energy / utility company
- “Having greater collaboration, including with smaller suppliers, would be key for moving forwards in the right direction.” Developer / connections representative
- “Yes, there should be a lot of emphasis on Scope 3 emissions. More emphasis is also needed on the evaluation for selecting partners and valuing the use of carbon.” Infrastructure / engineering representative

- “That idea that Scope 3 isn’t under direct control is a bit of a misnomer. We can say to people, don’t fly, don’t travel. So, it depends what your biggest emissions are. Ours is business travel. You should divide scope 3 into ones that you do have control over, and ones that you don’t.” Business representative



- “SSE will bring contractors over from southern England because they’re a fraction of a penny cheaper.” Developer / connections representative
- “Indirect emissions; we consider the miles that a vehicle travels. Sourcing locally.” Infrastructure / engineering representative

## 5. Is the resilient communities fund an effective way for SHE Transmission to support thriving communities?

- “SSEN should have staff to help people through the application process.” Local authority officer
- “ScottishPower Energy Networks have a green energy fund, SSEN should have that too.” Government / government body representative
- “There would usually be one member of the community driving that; lots of people can’t be bothered to get involved, so they get left behind.” Government / government body representative
- “It’s a natural way to put some benefit into the communities affected. The benefits of infrastructure are far from those communities; doing something that would bring the benefit closer to those affected is important.” Infrastructure / engineering representative
- “Most wind farms would voluntarily support the local community anyway, through funds, etc.” Business representative
- “I think you need to rebrand that one.” Developer / connections representative
- “Is it not better then to just fix the grid, if communities are affected? A lot of them would benefit from power, rather than a new minivan or whatever. Electricity is a fundamental need, like water.” Business representative
- “It’s like David Cameron and the Big Society thing. It’s that sort of positive legacy thing you have when anything you do impacts on a community, but we in the water industry

have that sort of leaving-a-legacy thing, where we renovated parks after some flooding, with the Capital programme, but we also do volunteering, it's a publicity thing." Energy / utility company

- "It's more of a distribution issue." Infrastructure / engineering representative

- "I didn't like this at all. The

emphasis should be put on getting communities to invest in generating their own electricity. This would help to drive the educational message through, as communities would have ownership over these schemes." Infrastructure / engineering representative

- "I'm worried that only communities that will have capacities will be able to benefit from the resilience fund." Developer / connections representative

- "The messages need to be clearer." Infrastructure / engineering representative

- "We do have a large stock of homes that are badly insulated. If you can use this fund to make homes more resilient, that can have a large effect." Infrastructure / engineering representative

- "I don't know what it means, because are you funding a community that is already thriving or one that you want to thrive?" Voluntary sector representative

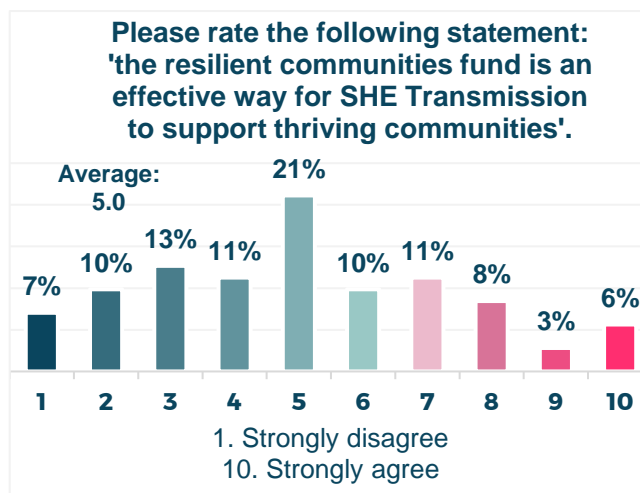
- "What's the role and scope of SHE Transmission compared to other actors? It's useful, but are there other actors that can provide these?" Business representative

- "It could be a life saver, even in a small hamlet. Some that has real value." Business representative

- "Bearing in mind it's such a big area, it doesn't seem like a lot of money, does it?" Infrastructure / engineering representative

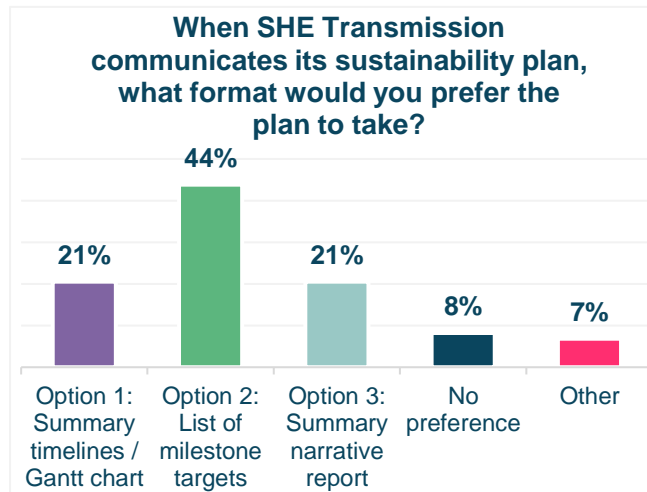
- "Brokering it through first responders and the emergency services is probably a good approach, rather than just people who know the system." Business representative

- "This is a known service, but we'd rather money was spent on improving infrastructure." Local authority officer



## 6. When SHE Transmission communicates its sustainability plan, what format would you prefer the plan to take?

After the session, as part of the electronic voting, stakeholders were asked to vote electronically on their preference for how SHE Transmission communicates its sustainability plan. With 44% of the votes, the most popular format among stakeholders was a list of milestone targets (Option 2).

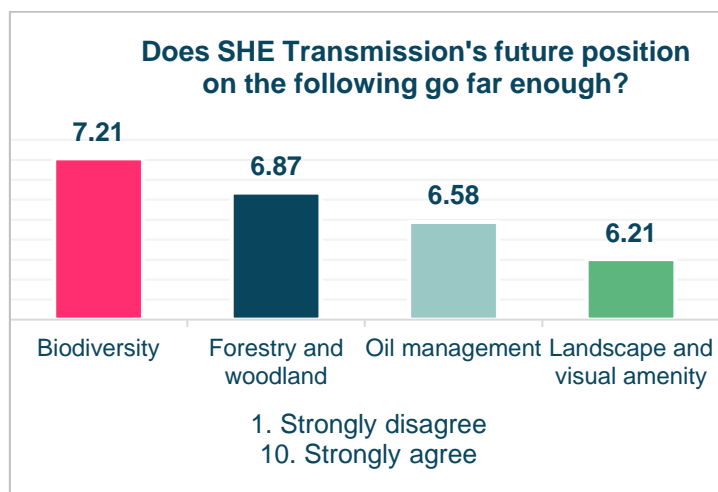


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## WORKSHOP THREE: OUR ENVIRONMENTAL INITIATIVES

### SUMMARY

The vote on whether SHE Transmission's planned position goes far enough in terms of all of the initiatives discussed at the workshop clearly showed that biodiversity is the area where most stakeholders believed the company should go further, followed by forestry and woodland.



### Biodiversity

Stakeholders generally supported SHE Transmission's biodiversity targets but wanted to see the company go even further, as it was felt that these targets were easily achievable. For example, several stakeholders wanted to see these commitments met now – with one suggesting that it should be projects planned from a certain date rather than using 'consented from'. It was felt that customer bills shouldn't go up to pay for meeting these targets, and that there should perhaps be support from Ofgem and the government.

Stakeholders gave a number of suggestions in terms of who SHE Transmission should be engaging with to develop the implementation plan and toolkit, including the Wildlife Trusts, The Scottish Environment Protection Agency (SEPA), community councils, local authorities, Scottish Natural Heritage (SNH), landowners and contractors. With regard to the latter, early engagement was advocated to ensure alignment on environmental matters.

When asked to vote electronically (on a scale of 1 to 10) on whether they felt SHE Transmission's future position on biodiversity goes far enough, stakeholders gave an average score of 7.2, which indicates that they want to see SHE Transmission take more action than is currently planned for RIIO-T2.

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## Forestry and Woodland

Stakeholders generally supported SHE Transmission's proposed future position on forestry and woodland, although some were keen to see the company take this further. For example, the suggestion was made that the replacement strategy should be more than one new tree for every felled tree. There was concern that the replacement strategy might not be delivered, particularly where landowners were being paid to do it.

Questions were asked about the definition of 'native' woodland, as it was felt that this could be used to get around meeting this target. In addition, stakeholders strongly felt that there should be different targets for commercial forestry and that customers shouldn't be funding replacement in these cases.

Stakeholders felt that there was a real opportunity to engage with local communities on this subject, stating that SHE Transmission should do more to promote their work in this area to customers.

When asked to vote electronically (on a scale of 1 to 10) on whether they felt SHE Transmission's future position on forestry and woodland goes far enough, stakeholders gave an average score of 6.9, which indicates that they are keen for the company to go further than is currently planned for RIIO-T2, although less action is required in comparison to biodiversity.

## Landscape and Visual Amenity

While there was support for SHE Transmission going further than planned to minimise visual impact through undergrounding, there were a number of caveats. Many stakeholders were of the view that visual amenity should not take precedence over costs. For example, it was felt that reducing costs for those living in fuel poverty was more important than aesthetics. Moreover, it was noted that many of the people paying the higher costs of undergrounding cables would never experience the benefits of this. It was, however, noted that improving views by undergrounding cables delivers tangible benefits to the local economy, particularly in tourist areas.

Those who were in favour of undergrounding cables argued that issues relating to reliability and the economic benefits of reducing the number of faults should be considered alongside the matter of visual amenity. It was added that SHE Transmission should do more to educate people on all of the competing issues to enable stakeholders to make an informed judgement.

The vote on whether Ofgem's VISTA fund should be extended into RIIO-T2 clearly showed that the majority were in favour. Almost half of those who participated voted 10 in response to this statement, indicating strong agreement. As the Vista fund is actually paid for by the energy

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companies, while people saw it as a worthwhile initiative, they acknowledged that it wasn't free money and that this money inevitably means a reduction in other initiatives. An informed willingness-to-pay exercise was suggested to help consumers better understand this.

## **Oil Management**

When stakeholders were asked to vote on whether SHE Transmission's position on oil management should go further than planned, almost a third voted 10, the highest score possible, meaning that they wanted the company to go much further than currently planned. The most prevalent answer to this question, however, was 5 out of 10, with 41% of votes.

The general view among stakeholders was that SHE Transmission should do whatever it takes to be a responsible custodian of the environment, which meant dealing with legacy issues relating to the remediation of contaminated land as well as investing in new technology such as synthetic ester-based transformer fluids. It was felt that the company should adopt an approach that involves reviewing which sites are the worst culprits for contamination so that it can focus on these. It was also added that the necessary surveying work should be carried out by an independent third party.

Although stakeholders felt that SHE Transmission should go further in its plans for oil management, they also stressed that the company should keep an eye on the cost of this and suggested carrying out a cost-benefit analysis to inform its strategy in this area. It was felt that the company needed to invest in innovation, such as ways of absorbing and storing leaked oil, as well as new alternatives to oil.

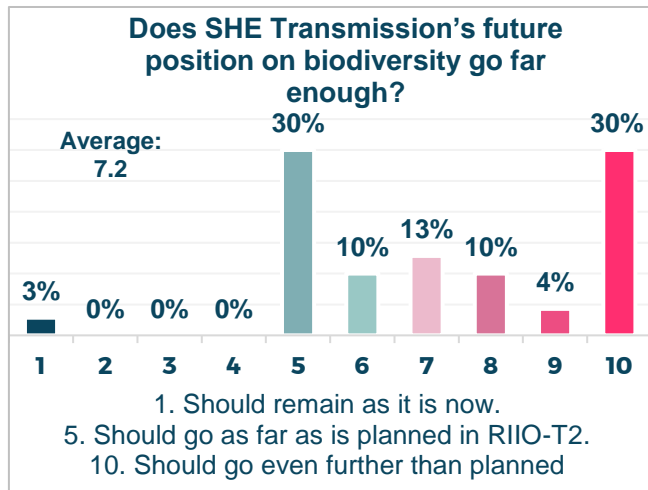
## **1. What do you think of SHE Transmission's planned future position on biodiversity?**

### **Who should we be engaging with when developing our biodiversity implementation plan and toolkit?**

- "A lot of this would be led by planning conditions." Energy / utility company
- "National Grid does a lot on natural capital." Energy / utility company
- "Can the company cover that cost or does it have to be the consumer?" Business representative
- "It shouldn't be passed on to the consumer at all." Developer / connections representative
- "Seems ambitious. It's not clear how it is measured. If you have a project that is a few kilometres long, how is net gain measured?" Environmental group representative



- “Not sure why it’s ‘consented from’. Why can’t it be any projects planned from a certain date? 2025 is a long way away and SSE doesn’t know when a project will get consented.” Environmental group representative
- “From a network perspective it’s a good target, but I am wondering why we can’t do it now?” Developer / connections representative
- “I didn’t hear anything about biosecurity, the chance of something going wrong: being imported; transferring non-native species; species getting trapped in machines.” Government / government body representative
- “It needs a step change; we always left things as we found them, now it’s more about improving what you found, which is good, but it has a huge effect on the cost, which is the customers’ cost.” Infrastructure / engineering representative
- “Scotland markets itself as a biodiverse, wild place. It’s an identity issue, so we really need to push the boat out. Cost does come into it, but maybe government should support it. From an eco-development point of view, it would be remiss to let things fall. It’s Scotland’s identity.” Government / government body representative
- “The statistics are very troubling, mostly blamed on modern farming methods. Anything we can do to stem that is good.” Energy / utility company
- “When you’re applying for planning, you have to do Environmental Impact Assessments (EIA). So, the EIA is a good mechanism to cover all your environmental issues.” Developer / connections representative
- “It seems quite achievable to me.” Developer / connections representative
- “Needs early engagement with contractors and route selectors to make sure they are aligned with management and environmental matters.” Infrastructure / engineering representative
- “Depending on the area you are in, the community council, that kind of stakeholder, needs to be involved as well as the regulatory committees. This is because of the impact that change in environment has on local communities.” Voluntary sector representative
- “SEPA would be the first I would suggest.” Developer / connections representative





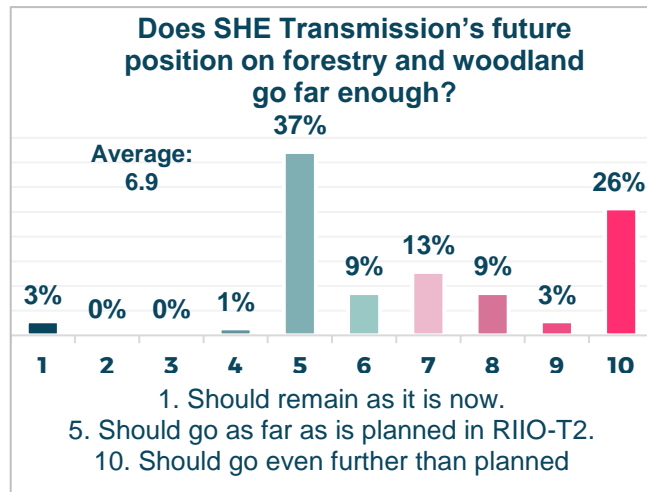
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- “Academia, to help you get the data?” Business representative
  - “Some of the landowners will be getting a payment for biodiversity, so there should be a consultation on what grants are being given out.” Business representative
  - “Biodiversity might include getting rid of invasive species. Things like Japanese knotweed destroy biodiversity; by tackling it, you’re helping.” Business representative
  - “It’s quite light on the marine side, so that needs to be developed.” Government / government body representative
  - “RSPB, an obvious one.” Environmental group representative
  - “SNH are the statutory consultee, so definitely them.” Voluntary sector representative
  - “Who are actually the ones who turn up and affect the environment? Who actually throws the diggers in the ground, and who’s contracted for the legacy?” Developer / connections representative
  - “Local authority as well, as they will have a biodiversity plan, I’m sure.” Business representative
  - “The Wildlife Trust sets the standard.” Developer / connections representative

## **2. What do you think of SHE Transmission’s future position on forestry and woodland?**

**Does this strike the right balance, given that SHE Transmission’s activities are ultimately funded by the end consumer?**

- “There’s a lot of get-out-of-jail cards. What do we class as native woodland? Some are brought in from Norway, so you can take some out and not replace it. It seems that we can get around this target.” Infrastructure / engineering representative
- “Will be interesting to see what the removal rate of native woodland is. I suspect it is a small amount versus commercial wood removal.” Environmental group representative
- “Sometimes forestry is a bad thing for birds. Waders like open environments and planting deters them. If forestry is being replaced, it needs to be carefully located so it doesn’t do more harm than good for biodiversity.” Environmental group representative
- “Sounds like a lot of land is forestry, but commercial. Should a bill payer be funding that in the future? Are we going to be held to ransom by the Forestry Commission? Can the government decide?” Developer / connections representative
- “What’s the criteria for which scheme gets picked? You need to prioritise things. The intent is clearly there, it’s just how it’s managed.” Business representative

- “It’s good for them to be a bit more ambitious in terms of forestry management plans, stakeholder engagement is also important in that. You need to get into the community and ask what they want.” Business representative



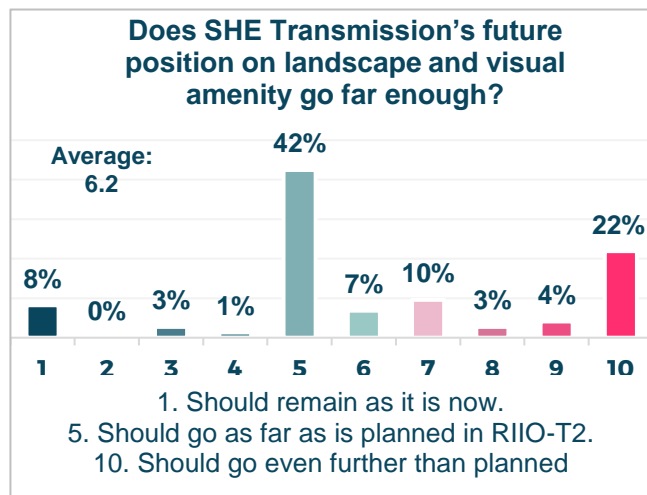
- “I think one thing you’ve got to watch in communities is that they’re all looking at trying to get money from you, so maybe the woodland schemes would be good for that.” Developer / connections representative
- “It’s a case of public engagement again.” Infrastructure / engineering representative
- “The 2.5 million figure is not that much in the grand scheme of things.” Developer / connections representative
- “If you’re cutting down really old trees, you’re losing the net carbon gain and the carbon effect will be delayed, as an older tree will be more effective than a sapling.” Infrastructure / engineering representative
- “Maybe plant three trees for every old tree cut down?” Developer / connections representative
- “There needs to be differentiation between public land and private land to stop obligations from being avoided.” Developer / connections representative
- “We took the waste wood from landowners who volunteered and gave it to community groups.” Developer / connections representative
- “Would people pay £1 to plant a tree?” Infrastructure / engineering representative
- “Could SHE Transmission not fund £2.5 million out of their profits to fund this?” Infrastructure / engineering representative
- “It is a bit too easy to say we’ve paid the landowner, so they will manage replanting the trees. It is most likely they are taking the money and using it for their own development. You need to follow up, so you know what they are using the money for.” Infrastructure / engineering representative
- “Where you are sterilising commercial woodland area, the soil management and biodiversity is now null; is anything being done to improve the biodiversity there?” Infrastructure / engineering representative
- “I think it’s a fair and sensible approach.” Infrastructure / engineering representative
- “Go up from planting one tree to two.” Business representative

- “It would be good to help consumers understand what that means. Like when you get a piece of paper telling you what your tax has been spent on. It would be useful to see a breakdown.” Business representative
- “For every tree they chop down, they plant one; it’s not quite the same balance as adding trees.” Infrastructure / engineering representative
- “A lot of trees being felled are commercial forests; if they’re felling these and planting one for one, that’s significant.” Developer / connections representative
- “Perhaps commercial forestry should have different rules, but they could look at improving their one-for-one commitment.” Infrastructure / engineering representative
- “For me you’ve got to have that insurance that things are being done.” Infrastructure / engineering representative
- “I wasn’t sure what ‘nearly native’ was. 15% or something?” Developer / connections representative
- “I think the concept is good.” Developer / connections representative

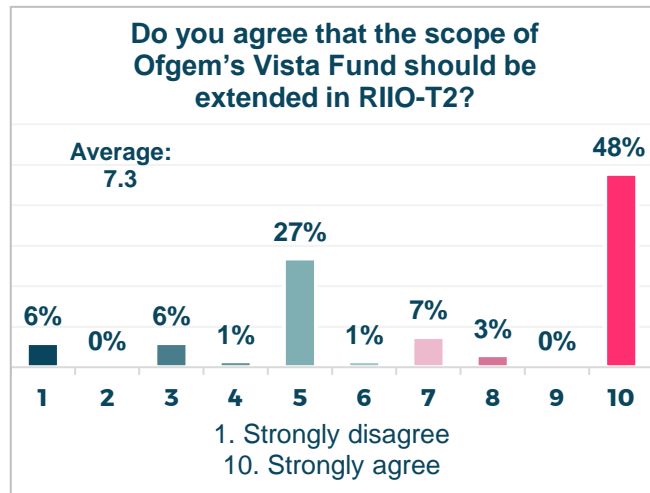
### 3. What do you think of SHE Transmission’s future position on landscape and visual amenity?

**Should Ofgem’s VISTA fund be extended in RIIO-T2? If so, should the scope of Ofgem’s fund be extended (e.g. biodiversity initiatives / wild land areas / tourist hotspots)?**

- “I agree with what you’re doing, but the question is, who is paying for it? If you’re living in an area like Glasgow and you don’t ever see the transmission towers, why would you want to pay?” Developer / connections representative
- “To me [the Vista fund] is a good idea.” Developer / connections representative
- “We are trying to sort out a large scheme for National Grid. It’s a massive undertaking. Four power schemes are currently going through to Vista at the moment. There’s rumblings they’re going to scrap that money come T2.” Infrastructure / engineering representative



- “I think if you have better stakeholder engagement, that’s good enough to demonstrate to Ofgem that they’re getting value for money to underground cables.” Energy / utility company
- “Is the visual change acceptable? That’s what you’re looking at.” Developer / connections representative
- “More assessment has to be made about groundwater. You could be disturbing ecology or peat. Cutting a line through a piece of land could interrupt hydrology flow.” Environmental group representative
- “Underground should be the exception rather than the rule. There’s a cost and a time to develop these projects.” Developer / connections representative
- “When does cost override visual impact? The cost of underground can be 20 times that of overground. National Grid doing cost analyses with this. It’s an opinion rather than a fact and comes down to how well each side argues.” Infrastructure / engineering representative
- “I think it’s important to lay out the options, including the costs and visual impact. Scottish government should be taking these things into account and making decisions around pre-existing guidelines. Consenting divisions ask to provide different options as part of the consenting process.” Government / government body representative
- “Where there’s a tourist area and transmission line, things are more nuanced. Overhead lines could have a big impact on people’s livelihoods.” Infrastructure / engineering representative
- “My grandchildren will not have any pylons visible. And saying that it’s 20 times more expensive for underground cables is not true. We should be focusing on invisible technology.” Infrastructure / engineering representative
- “The first company to go underground as standard will end up ahead of everyone else. Legislation drives the technology. It needs a step change, which will be driven by legislation.” Infrastructure / engineering representative
- “There’s lots of innovative companies revolutionising transformer technology. It needs government support.” Government / government body representative



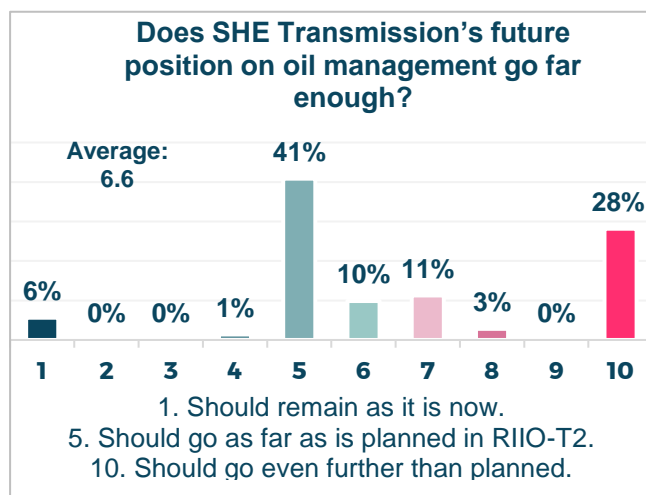
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- “Subsidies for wind farms have driven innovation, which would be the same with undergrounding.” Infrastructure / engineering representative
  - “[Undergrounding] can take 20 times longer to do that, and 20 times longer to fix a problem and find a fault. So in terms of that, I don’t think it’s going to change.” Developer / connections representative
  - “As a cable manufacturer I’d say yes, the scope of the fund should be extended!” Infrastructure / engineering representative
  - “We opened two wind farms and there’s been more tourism in the area since we opened them up! Because the roads are there. It’s opened a lot of areas up.” Developer / connections representative
  - “I think that it’s an interesting one. How do you value visual amenities? What are the competing priorities?” Developer / connections representative
  - “It feels like underground choices are driven by public pressure, rather than concerns relating to engineering and power distribution.” Infrastructure / engineering representative
  - “I don’t know whether this has a place. What’s the scope for developing innovation for the future?” Environmental group representative
  - “I feel like a large amount of the Vista fund can be invested in innovation, rather than mitigating these environmental problems. Surely that makes sense for the future?” Environmental group representative
  - “The fund is actually paid for by the energy companies, so it’s not free money. I’ve got a personal issue with the UK government. They don’t prioritise the people in poverty and how the taxpayers are paying it when it should be Ofgem money.” Voluntary sector representative
  - “There was a survey done in the willingness of the customer to pay for this, which is funding Ofgem, and it was a bit inconclusive. While you improve the visuals, you are arguably improving the environment. But you are decreasing the security of supply, as they are underground and harder to reach.” Voluntary sector representative
  - “How do you define what is an area of natural beauty?” Business representative
  - “I thought that table in the presentation needed more explanation. It made it look like there was no reason to go underground, but everyone would want it.” Business representative
  - “In the context of transmission, the impact of going underground comes at a cost that isn’t necessarily immediately apparent.” Business representative
  - “If undergrounding is going to reduce the number of faults, that will be worth a lot over 40 years compared to the investment.” Business representative

- “With climate change, the frequency and extremity of events, like what happened in Arran, will increase, so shouldn’t undergrounding be targeted in those areas?” Business representative
- “It’s more time-consuming to repair underground cables. It’s about weighing up what makes more sense. The Nordic model is a good model to work to.” Business representative
- “In terms of transmission, overhead lines make better economic sense.” Developer / connections representative
- “If the end consumer knew the additional costs of undergrounding, they’d be more accepting of overhead lines.” Developer / connections representative

#### 4. What do you think of SHE Transmission’s future position on oil management?

**Should SHE Transmission prioritise action over legacy contaminated land at substation sites, future use of synthetic ester-based transformer fluids, or both?**

- “You have to deal with your legacy issues. Ultimately, it reflects on your brand image. You can’t be seen to be building brand systems but not dealing with current issues like leakages.” Developer / connections representative



- “I’d look at the legacy. You should look at the worst sites and focus on this financial year first.” Developer / connections representative
- “In terms of asset management, we have a full risk assessment process. We have to mitigate. We have Ofgem rules we have to follow.” Developer / connections representative
- “A lot of this has to depend on costs, I’m afraid.” Local authority officer
- “If you disrupt a site, or decommission things, you should be leaving them better than before, leaving a better environment.” Local authority officer
- “An independent body should monitor contamination.” Government / government body representative

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- “Eco folks are employed by the developer, so their hands are tied about what they can say and do. Ofgem should be involved.” Government / government body representative
  - “The environmental concerns are worth investing in. There needs to be more competition to drive innovation.” Infrastructure / engineering representative
  - “It’s easy to say the price is worth paying. In Shetland there’s lots of fuel poverty, so who’s paying for this? People can’t afford this extra for investment on their bill.” Local authority officer
  - “You’re right, there has to be a balance so that those who have to pay more for their bills don’t pay more towards the developments.” Infrastructure / engineering representative
  - “Profits are continuing to go up, so where is the extra money going?” Local authority officer
  - “It’s expensive. I didn’t realise how costly it was to deal with contaminated land.” Developer / connections representative
  - “If you use more of these synthetic things, would the costs come down? It’s all about innovation.” Energy / utility company
  - “Obviously, if it ain’t broke, don’t fix it. Don’t add cost if there’s not going to be a measurable outcome. But if there are priorities over cleaning up contaminated sites, I’d say that’s priority number one. Then the jury’s still out over whether to continue using oil or to use other materials.” Business representative
  - “People would be horrified to find that most of the legacy substations do leak, but are they doing any harm? Possibly not.” Infrastructure / engineering representative
  - “This just drives me nuts because the oil management is well structured and the benefits of ester are being very overplayed... The problems with oil don’t actually exist... If you’re talking about assets that are at the end of their life and are not bundled, there’s a case for using natural ester, however.” Infrastructure / engineering representative
  - “Oil in the assets is stable and can be used in the future. Is this a problem that we need to solve? Ester will drive costs up and increase the asset’s risk because it’s new.” Infrastructure / engineering representative
  - “It’s shocking that you’re asking stakeholders about whether legislation that has been introduced in 2006 is safe.” Developer / connections representative
  - “All of these things are good and people are going to pay more, but are they all going to subscribe to all of these concerns relating to the environment?” Infrastructure / engineering representative

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- “Is the submission for Ofgem or stakeholders?” Infrastructure / engineering representative
  - “Hopefully, there won’t be an issue of synthetic oil in the future anymore.” Infrastructure / engineering representative
  - “I’d never admit to saying it, but this isn’t an issue to bring to end users. It’s too big.” Infrastructure / engineering representative
  - “To me, it’s more important to build something new that we can do better, rather than repair something that doesn’t work very well.” Infrastructure / engineering representative
  - “The link to oil will always be there in some shape or form. We’ve seen that stuff that absorbs the actual oil in an underground tank, which is great, but these things are always costly, so again it brings price back into it. It’s a question of willingness to pay. Everyone is focused on environment and sustainability, but there’s always a price involved, so how do you maintain that balance?” Voluntary sector representative
  - “Maintain the asset. Resolve it.” Infrastructure / engineering representative
  - “Some sites may have had leakage transformers for a couple of decades. It’s about prioritising.” Business representative
  - “They should be capturing the worst leaks somehow. It’s more challenging once the leak is in the landscape.” Business representative
  - “As contractors, if we have someone on-site, and a litre of oil spills on the ground, we’re in trouble. We have to do investigation reports. If there’s leakage, we’ve got to fix it.” Infrastructure / engineering representative
  - “They won’t rip out every transformer in the network. Prioritisation is necessary going forward.” Infrastructure / engineering representative
  - “A cost-benefit consideration is important, but so is environmental impact. Even if you do have a leak, this can be managed.” Infrastructure / engineering representative
  - “What’s the potential for these cost increases to disappear over time? In terms of a global standard, you can see that levelling out.” Developer / connections representative
  - “For new builds, you should factor in synthetic esters.” Infrastructure / engineering representative



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## WORKSHOP FOUR: OUR INNOVATION STRATEGY

### SUMMARY

In general, there was consensus that although the industry is inherently slow in innovating, it was important to work out how to spur on an increased rate of innovation. A number of stakeholders felt that innovations do not necessarily need to be radical, but may instead be smaller scale and apply to specific projects.

#### Ofgem's Innovation Reforms

In general, stakeholders supported Ofgem's proposed innovation reforms. There was significant support for greater collaboration and third-party involvement, including with the supply chain. However, there was concern that funding innovation through business as usual might hinder innovation. Stakeholders felt that it was important to help stimulate innovation by driving competition.

When asked to vote electronically on whether they agreed with these reforms, in general stakeholders strongly agreed with 'increased third party involvement in network innovation projects', giving an average score of 8.8 out of 10. However, on average stakeholders tended to disagree with 'fund majority innovation through business as usual', scoring it at 4.7.

#### SHE Transmission's Innovation Values

Stakeholders broadly supported SHE Transmission's proposed innovation values. However, some improvements were suggested. This included broadening out the definition of innovation, as well considering it in the context of wider societal ambitions for a low-carbon energy system and not just the transmission network. Several questioned which 'customer' the values referred to. When asked whether anything was missing, several stakeholders stressed the importance of fundamentally changing company culture to ensure that innovation permeates through all levels of the business. It was also noted that the structure of large companies such as SSE makes it difficult to be agile, as certain initiatives will inevitably take a long time to enact.

When asked whether they were comfortable with the proposed innovation values, stakeholders gave an average score of 6.1 out of 10, which meant that they agreed with the statement, but not strongly. In fact, the most popular answer was 5, which was 'neutral', with 21% of the vote.

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## **Delivering Efficiently**

In terms of delivering efficiently, stakeholders discussed how standards often prohibit innovation, which presents a challenge for the industry. Stakeholders also stressed the importance of ensuring a reasonable timescale to allow for the development of innovation projects. The point was made that innovation will inevitably lead to efficiency savings.

There was a discussion about how best to incentivise innovation and the need to drive competition. Stakeholders also commented that SHE Transmission needs to ensure that a culture of innovation permeates through the company to help deliver innovation efficiently.

## **Sustainable Ambitions**

Stakeholders reiterated the need to work collaboratively to help achieve sustainable ambitions through innovation. The issue of regulation was again raised as a potential barrier to delivering this, along with cost. It was felt that SHE Transmission needs to be clear on what it means by the term 'sustainability', and that this understanding then needs to permeate through the business. Stakeholders suggested that the tender process should be changed to encourage suppliers to include sustainable innovations as part of their bids. Stakeholders also pointed to the need for a clearer commitment to combatting climate change.

## **Collaborative Efforts**

Stakeholders felt that in order to effect real change, SHE Transmission needs to bring in 'disruptive' people and companies that think differently. Stakeholders called for more collaboration on innovation with the distribution side of the business. It was agreed that there should be more communication with suppliers, other utilities and the rest of the industry to share innovations. However, some warned that SHE Transmission needed to be wary of the vested interests involved in the industry, which could stifle innovation. Stakeholders wanted to see more collaboration with academics, as well as local communities. One stakeholder also noted that it was important to collaborate with multinational companies to get a global perspective.

## **Support Customer**

The conversations here primarily focused on how best to consult customers. The consensus was that small, focused, regular workshops were the best method for this, although larger workshops were still needed. One stakeholder called for the development of an innovation portal that stakeholders could access. A point was made about the definition of 'customer' as opposed to 'stakeholder', as it was felt a traditional 'customer' would primarily be concerned

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with keeping the lights on. One stakeholder said they felt SHE Transmission sometimes asked questions when they had already decided on the answer, stressing that if they really want to support the customer here, they need to genuinely listen.

## **People Focused**

Time was felt to be the most significant factor when it comes to ensuring that innovation is people focused; when new products are introduced, extra time needs to be built in for training. In addition, it was felt that reducing the size of the workforce for cost-saving purposes would negatively impact the company's ability to remain people focused. Stakeholders agreed that it was important to learn from projects and pass on that learning.

## **Areas and Themes for Future Innovation**

In terms of themes, the largest proportion of stakeholders (25%) wanted to see SHE Transmission focus their innovation on 'transition to a low-carbon future', particularly in terms of battery storage. However, 'network improvement and system operability' and 'new technologies and commercial evolution' also ranked highly. When stakeholders were asked to vote on individual areas, 'whole system considerations' ranked the highest. It was felt that 'safety, health and environment' shouldn't be a stand-alone theme, but should be incorporated in every innovation introduced by SHE Transmission.

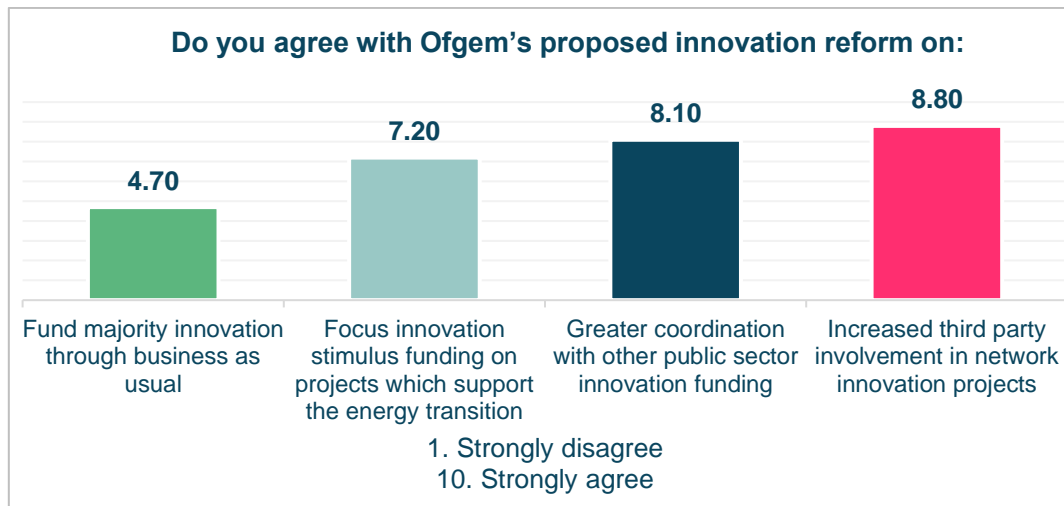
Stakeholders made some general comments in relation to innovation. These included concerns about how innovation would be funded and whether it would impact on customer bills; comments that SHE Transmission has been somewhat slow to adopt innovation and needed to be more open in this regard; a recognition of the risks involved in investing in innovations before knowing whether or not they will be effective; and the need to look to small suppliers for new innovation ideas as well as larger ones.

## **Do you have any comments on Ofgem's proposed innovation reforms?**

- "I agree with the Ofgem reforms." Developer / connections representative
- "Earlier involvement with third parties like the supply chain would be beneficial." Infrastructure / engineering representative
- "With innovation funding, it's hard to pick up the long-term benefits. Innovation funding is for big gaps in the industry and it's difficult to deal with these kinds of problems with such a tight price control... We're already doing things to try and offset some problems... The funding should be for trickier things." Developer / connections representative

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- “Ofgem is missing the focus in terms of hitting long-term targets. These innovations from individual companies will benefit the entire industry. It’s missing what it actually needs to achieve.” Infrastructure / engineering representative
  - “Innovation funding is incredibly important. There are about eight or nine different funds, which is 10 times the Ofgem funding.” Infrastructure / engineering representative
  - “The only thing about funding the majority through business as usual is it should be a priority. The company has to drive this innovation whether there is funding or not, as it’s a benefit to the customers and everyone else; there needs to be a push for Ofgem to do that.” Infrastructure / engineering representative
  - “I’m not sure you can really disagree with that because it is very generalised statements that cover all bases. Certainly, it is important to think about greater public and private sector involvement, rather than the electricity networks in isolation. It’s a big issue with gas, water, everything.” Infrastructure / engineering representative
  - “I disagree with the funding as it stands, because innovation has risk and the flaw with Ofgem’s approach is that they think a great innovative idea can easily be monetised for a beneficial outcome. You have to be brave enough to do it. You have to create a safe environment for people to take risks in. They do it through network innovation competitions, so there is funding available but it’s through a competitive process. Innovation should be a part of all business anyway.” Voluntary sector representative
  - “Ofgem thinks you might get it right first time, but that might not always be the case.” Voluntary sector representative
  - “The last two points in the list [greater coordination with other public sector innovation funding and increased third-party involvement] – does that fit with the way that the funds from SSE and SHE Transmission are distributed?” Business representative
  - “The value of innovation projects is what the network companies learn from them, not necessarily a tangible financial return.” Business representative
  - “Should Ofgem take the view that they should use a third party which would engage with the transmission owners and drive innovation that way? A third party has the money and could make it happen, rather than Ofgem.” Developer / connections representative
  - “Broaden the scope a bit across the networks so that it becomes more collaborative. There’s occasionally repetition of work.” Business representative
  - “Will people strive for innovation if they have to do it through business as usual? If it’s the cost, you’ve got the Network Innovation Allowance (NIA) which would incentivise me to innovate.” Voluntary sector representative

- “I think the second one seems to be quite significant. I think it’s really the importance of driving competition.” Business representative
- “I would make my point again that the transmission owners should be more explicit about the need for collaboration, which includes sharing innovation.” Developer / connections representative



## 1. What do you think of SHE Transmission’s innovation values – is there anything missing?

- “Agile is a huge word at the moment in our business. We are trying to figure out what that means.” Developer / connections representative
- “In terms of explaining agile, we were talking about processes taking a year to get off the ground, whereas it could be done in months. It’s kind of getting out of that process.” Business representative
- “I don’t think agile fits in with large corporates like SSE.” Developer / connections representative
- “Innovation is being defined too narrowly rather than allowing to look in-depth.” Infrastructure / engineering representative
- “You need to broaden this out beyond just the transmission network. What role will transition play in the low-carbon energy system or the type of country we want to live in?” Government / government body representative
- “There’s a lot of opportunity here. For example, we think of ourselves not just as a developer, but as a health provider, by reducing smog and increasing warmth in homes. We’re a transport company too. You’ve got a different, difficult role to play as transmission engineers and you need to think bigger.” Developer / connections representative

- “Do you want to be the best? The middle part [‘responsible innovator’] is very standard. Not very forward-thinking.”

Government / government body representative

- “There’s a balance between being a trailblazer versus

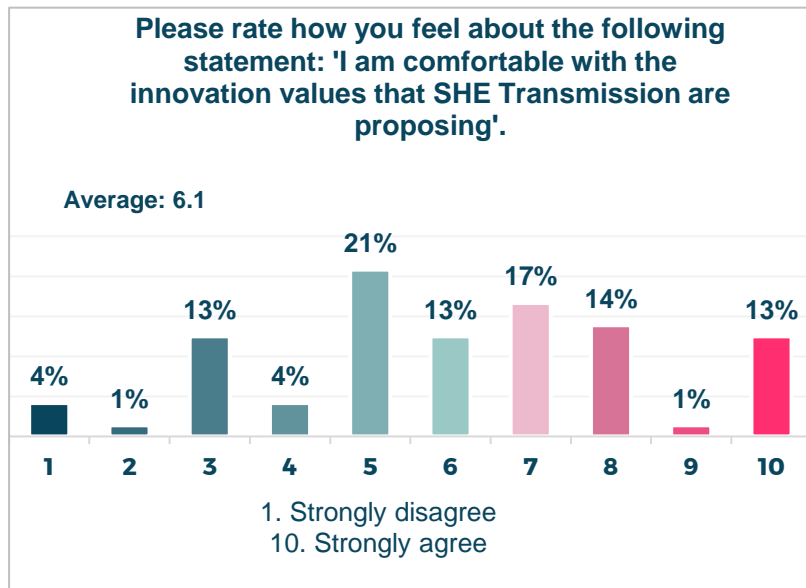
being an early adopter of new innovations.” Infrastructure / engineering representative

- “We’ve had lots of innovation-type strategies; there’s a thing about the culture of the organisation. We weren’t particularly successful until we changed the culture of the organisation to be innovative. That was our most useful shift. We stopped looking at the sexy big-ticket things. It’s more about embedding innovation into your culture. I don’t even know who the head of our innovation team is anymore.” Energy / utility company

- “It’s got to have a benefit to the customer. All that Ofgem cares about is reducing bills.” Infrastructure / engineering representative

- “You have two customers with different needs commercially and communities who worry about landscape issues. Who is SHE Transmission talking to?” Infrastructure / engineering representative

- “The general approach seems fine.” Environmental group representative



## 2. What are the key factors SHE Transmission need to consider to ensure their approach to innovation ‘delivers efficiently’?

- “It’s the appetite for taking a bit of calculated risk.” Infrastructure / engineering representative
- “I think the worry is that if we don’t apply with standards and you don’t put a benchmark offer in, then you might get kicked out. Could we put our most innovative proposal in but not benchmark? It’s a risk on us and a huge investment in tendering time...” Developer / connections representative

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- “The industry is stuck with all of these standards, which makes it difficult for anyone to think outside the box or take calculated risks.” Infrastructure / engineering representative
  - “It needs to be safe.” Energy / utility company
  - “You need to look at the timing of it. Innovations don’t just happen, they take time to develop. It’s about realistic timing.” Developer / connections representative
  - “Savings are achieved through innovation. For example, we had one operator put three cables in the same duct and they found out they could put more through the conductor. It was quite innovative, but we don’t know what the results are yet.” Developer / connections representative
  - “Maybe taking a view of being more realistic. For example, wind farms don’t run at 100% most of the time.” Infrastructure / engineering representative
  - “You think when you put in a duct, why not just put in a bigger duct – because Ofgem won’t allow you to!” Developer / connections representative
  - “It’s about how you incentivise. Most innovations come from the supply chain and things, it’s how you incentivise it. That’s a key issue. Otherwise people just keep doing the same thing, if the money’s always there.” Energy / utility company
  - “Competition is an obvious one, but there might be more enlightened ways of doing it.” Energy / utility company
  - “We’ve seen it with suppliers where there’s one part of the business that has an incentive, but the other side can’t keep up.” Infrastructure / engineering representative
  - “With innovation it’s all got to be tied together. For example, one side of the business might say we want to do this and that, but the communications side might say we can’t. It’s got to be inclusive across the business.” Infrastructure / engineering representative
  - “That ties into the culture point.” Infrastructure / engineering representative
  - “It’s been easier for us lately now that innovation is embedded in our culture.” Energy / utility company

### 3. What are the key factors SHE Transmission need to consider to ensure their approach to innovation has ‘sustainable ambitions’?

- “Engage the right people at the right time. It comes back to the point about getting people in at the early stages, if SHE Transmission are open to innovation and change.” Infrastructure / engineering representative
- “It has to be a collaborative approach to find solutions.” Infrastructure / engineering representative



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- “Innovation is a move away from the traditional commercial model in the sense that it is an investment and there is a risk involved. You have to create the right balance and support for something to be enduring. In the tender process you are limited by the need to meet certain criteria, but you should be able to monetise innovation, with environment and everything. The tender process should contain component parts that aren’t just technical.” Voluntary sector representative
  - “It’s a question of changing the mindset that comes from the top of the organisation. We need a safe environment from the regulator and from the organisation.” Infrastructure / engineering representative
  - “For the transmission officers, there needs to be an acceptance that traditional engineering values may not be the right way anymore.” Voluntary sector representative
  - “It’s certainly not easy. The barriers are regulation and people not being receptive enough to the new. And not realising that innovation moves things forward. SHE Transmission are not receptive enough.” Developer / connections representative
  - “What’s the process for taking on these new innovations? There needs to be more clarity.” Business representative
  - “You are bound to the government’s emissions targets here.” Business representative
  - “SSE need to establish what sustainability means for them and apply that to all areas of their business, as consistency is needed.” Environmental group representative
  - “What do SSE mean by a sustainable ambition?” Environmental group representative
  - “It’s one thing doing sustainable ambitions through innovation, but SHE Transmission really just want to save money, which limits what we can do.” Infrastructure / engineering representative
  - “A more explicit commitment to fighting climate change would be good.” Environmental group representative
  - “We have a project now working on digital substations, all about IT power sockets, and there’s an environmental benefit there, obviously. The property footprint is a lot smaller and the visual impact too. There are still cables there, but maybe it’s thinking about what kind of cable or less cable. Using less traditional approaches means less waste, less metal.” Voluntary sector representative

#### **4. What are the key factors SHE Transmission need to consider to ensure their approach to innovation is ‘collaborative’?**

- “You should be working with academics.” Government / government body representative

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- “Benchmark against the best of the best. Compare to the best. Who’s the best at technology, should we be using them? Google, for instance. Bring in disrupters, not the same old collaborators.” Infrastructure / engineering representative
  - “Bring new kids in who think differently. Google school, for example.” Government / government body representative
  - “Is the distribution side the same as transmission? Same ideas and drivers? Lots of talk about innovation in distribution. Is it the same with transmission?” Government / government body representative
  - “Why aren’t we vertically integrating? When all departments are fluidly communicating, it’s faster and more efficient.” Infrastructure / engineering representative
  - “It’s hard to say who SSE should be collaborating with on a high level.” Government / government body representative
  - “We find that if you’ve got business after business, you genuinely do learn from one site to the other. There’s a lot that goes on day by day by delivering work, not necessarily big innovations.” Developer / connections representative
  - “If you’re doing community-based innovation, then we have to get wider organisations involved, but then how do you get them to spend money on this innovation?” Infrastructure / engineering representative
  - “They should be looking to take advantage of community councils to get community development trusts together.” Environmental group representative
  - “They have to come together for this to come together.” Developer / connections representative
  - “Again, to work with them more closely and build communication and really listen to the locals about how it’s affecting them.” Environmental group representative
  - “What is going to help is funding the universities to research it and to then advise.” Infrastructure / engineering representative
  - “It’s about getting the right stakeholders and collaborative people together at the right time to be able to actually further ourselves in these issues.” Infrastructure / engineering representative
  - “People have vested interests, it can be hard to overcome those. You need to get people to collaborate.” Business representative
  - “I’d like to see more involvement with the supply chain. Contractors work with every network operator in the UK but do not get the chance to share their innovation with SSE. They set the agenda and we don’t get to participate.” Developer / connections representative

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- “The way the industry manages itself through the process seems to be policed by so many vested interests in it; that actually works against innovation. There’s definitely an opportunity there to adjust the cost process.” Developer / connections representative
  - “In France it’s not the same process, but there are similarities. You can use an aluminium-welded screen avoiding wires and copper. Being global gives an opportunity to bring things that could be beneficial.” Infrastructure / engineering representative
  - “As I’ve delivered a lot of innovation projects, the community engagement is usually limited and then volunteers have to be involved, which is not effective. How do you then roll them out properly and pay people to keep running it consistently?” Developer / connections representative

## **5. What are the key factors SHE Transmission need to consider to ensure their approach to innovation ‘supports the customer’?**

- “There are some topics from today that you could really dive into and get stakeholders together to further strategic goals.” Environmental group representative
- “I like that idea: have the large general ones less often and the particular focus groups more often in order to understand what your customers need.” Infrastructure / engineering representative
- “It would be great if you could have a portal where you could see particular innovations that you are interested in.” Developer / connections representative
- “If you’re getting people in the room, you have to make it worthwhile.” Environmental group representative
- “You need to work with us to highlight where there are major issues that need innovation to help solve them. It feels like you’ve already decided a solution to the problem, denying any space for anything else.” Infrastructure / engineering representative
- “You’ve got to be careful about understanding where the area of expertise is.” Infrastructure / engineering representative
- “Customers and stakeholders will have different priorities. Customers simply want their power to come on.” Developer / connections representative
- “It’s the stakeholder’s responsibly to say what’s valuable in terms of innovation. It’s not always going to be clear straight away that it is going to save money, but there could be other benefits.” Infrastructure / engineering representative
- “It’s more about getting a forum where we can talk directly. We’re experts on what we do, we know where we can save money, so just give us the opportunity to talk to you.

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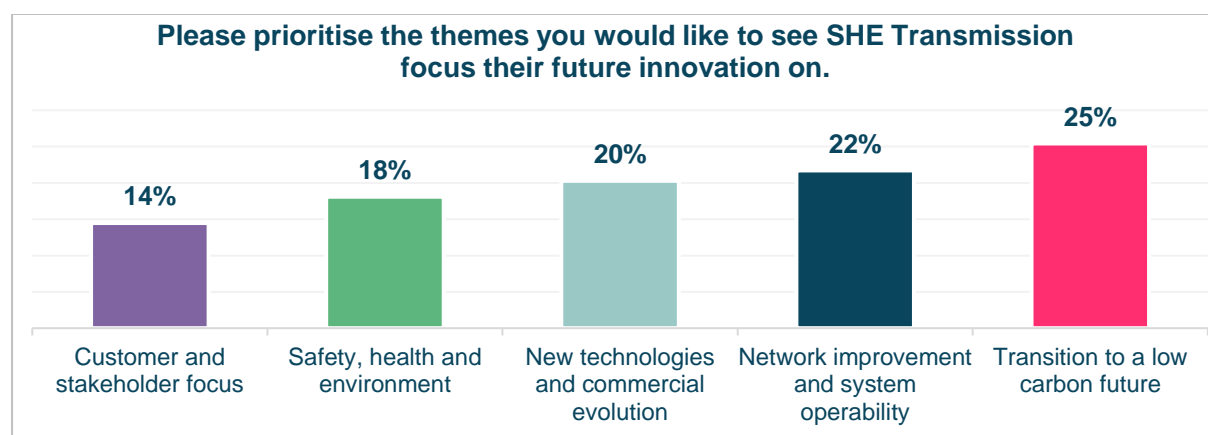
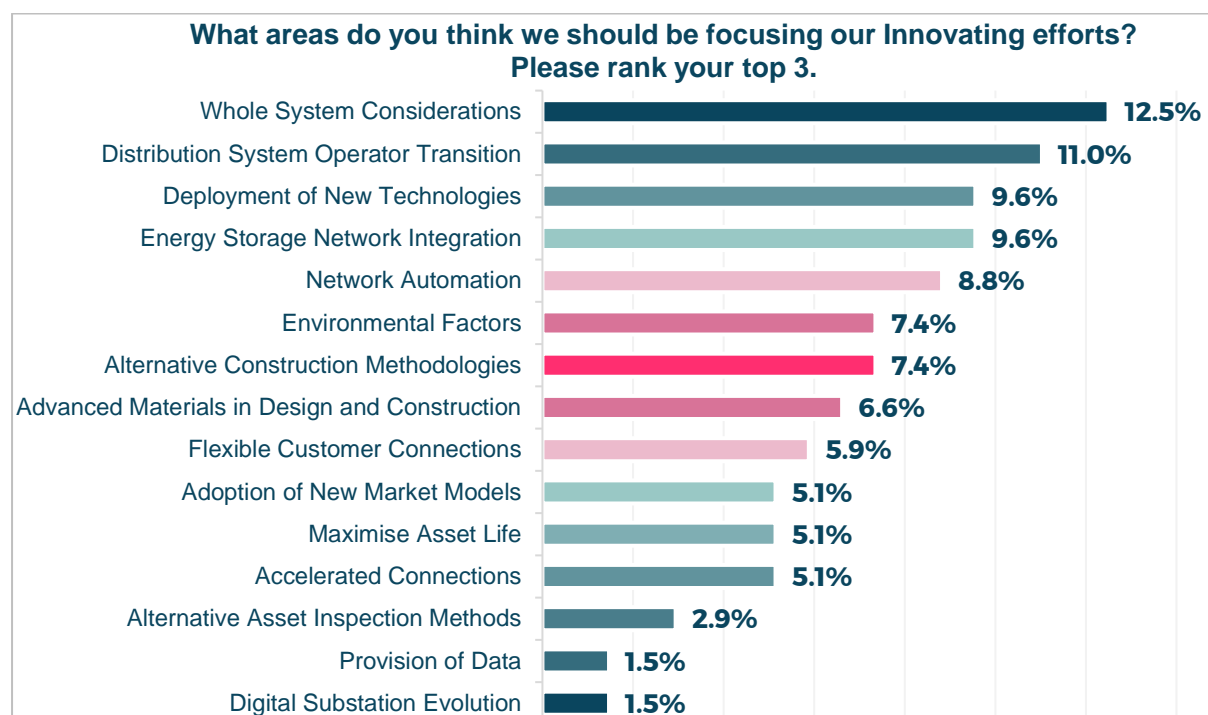
Those sorts of forums are more proactive. It also allows us to get out of our box and talk to everyone it affects in the supply chain.” Infrastructure / engineering representative

- “Maybe SHE Transmission should host forums where you can invite colleagues from other areas of your industry. Different forums for different things are a really important thing.” Developer / connections representative

## **6. What are the key factors SHE Transmission need to consider to ensure their approach to innovation is ‘people focused’?**

- “You’ve got to engage with the right people at the right time, but you’ve got to get buy-in and convince them.” Business representative
- “The training time and cost for new innovative products.” Infrastructure / engineering representative
- “There’s a question of corporate memory. For many reasons, things like the trident and portal lines, guys developed things to work more easily in the 60s. Those guys have retired, and we’re stuck reinventing the wheel. The lessons learned have got to be accessible dynamically.” Business representative
- “The time for people. How can you do your day job better? You need to recognise that to corporately invest time is a challenge.” Business representative
- “You’ve got to consider when training that someone will have to go out there at three in the morning. You’ll struggle to find two things done the same way anywhere, so it’s difficult to get that level of familiarity. The drive to reduce workforce is unsustainable for this.” Business representative
- “In the supply chain from a technology point of view, the engagement is greater with other utilities compared with SSE.” Infrastructure / engineering representative
- “I think they tried to gain momentum with this a few years ago but it didn’t go anywhere. More momentum on the innovation thread with the supply chain is needed, in technology and project delivery.” Infrastructure / engineering representative
- “Engaging physically is so important, not just saying you will.” Infrastructure / engineering representative
- “Synergies. You’re doing something in an area, someone else is doing something in the same place. You’ve got duplicated outcomes. It’s to do with engaging with the right people, but it’s about finding out what’s going on in an area and getting synergy.” Business representative
- “There is an element of going to a subcontractor and you want to find someone who’s in and out as fast as possible.” Business representative

## 7. In future, what areas would you like to see SHE Transmission innovate in?



- “Storage. Wind farms and renewables need their capacity stored. Battery plants are starting to be developed, but we need to do more.” Infrastructure / engineering representative
- “Construction methodologies would be good to focus on. The most environmentally appropriate route is sometimes discounted as too costly.” Environmental group representative
- “A transition to a low-carbon future is the great prize. As an industry we have to achieve that. The transition is where we need to be putting our energies and funding.” Developer / connections representative

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- “For me, the whole system needs innovation.” Government / government body representative
  - “Flexible customer connection would be very useful. On Shetland there’s lots of regulation as to how much you can put in; that limits the technology that can be used.” Local authority officer
  - “Need to be focusing on making things maintenance free. Automation and technology, it won’t need all the safety and maintenance because it will be automated. Needs a change of thought. How could we maintain towers without putting people on the top?” Infrastructure / engineering representative
  - “There is something to be done in condition monitoring, monitoring faults for maintenance and fixing faults before they happen.” Infrastructure / engineering representative
  - “‘Safety, health and environment’ is quite a big bundle. It feels like it’s being underplayed.” Environmental group representative
  - “I feel that safety and the environment is something that should permeate across any innovation that you are doing.” Developer / connections representative
  - “Energy storage is an enormous opportunity area in the UK, a problem is that mostly this is discussed as using a lithium ion battery as the main method and this will lead to an environmental problem in years to come. Innovative storage technology solutions would be useful before talking about upgrading the network. Hydrogen is a good example of this.” Developer / connections representative
  - “Part of the innovation has to be about challenging the regulation on energy storage.” Developer / connections representative
  - “In the Western Isles we have hydrogen production, that could be a solution elsewhere.” Government / government body representative
  - “Accelerating connections would be the most important in my view.” Developer / connections representative

## 8. Do you have any other comments about innovation?

- “I actually don’t reckon it’s very cash intensive, many of these things. SHE Transmission ought to have a bit more of an entrepreneurial approach to things.” Business representative
- “Innovation costs additional money. How would that work? The risk is that businesses will do less as we are being efficient as part of our regulatory price control package. Innovation needs seed funding. How do we do that if we’re not allowed to use it? This should be explicit in our funding package.” Developer / connections representative

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- “SSE typically have been a bit slower on the uptake, but it’s changed over the past year, with new reception. It’s better now, compared to ScottishPower.” Infrastructure / engineering representative
  - “From a supplier point of view, we’ve driven innovations, but they haven’t been implemented by SHE Transmission, so perhaps more openness from SHE Transmission on adopting innovations and reducing perceived risk on innovations. There should be more openness on sharing where the innovative technology is being used elsewhere.” Infrastructure / engineering representative
  - “With the money wind farms make, they have a lot of disposable income, maybe the connections could show more innovation, but you need to pay for this. For us it’s often well worth paying extra, as it secures supply.” Developer / connections representative
  - “How much would the end user have to pay for it and how much would SHE Transmission pay?” Developer / connections representative
  - “People will wonder about where the end result is for their innovation funding. This should be driven by Ofgem rather than customers.” Infrastructure / engineering representative
  - “You need to be able to prove that it will be effective. You don’t want to risk your business on it.” Developer / connections representative
  - “You should agree to create and support competitive communities. They need to be brought along with it for effective implementation.” Voluntary sector representative
  - “I wonder how much SHE Transmission would benefit from a greater quantity of data. You need to sit within your business somewhere and work out what you do with your data.” Developer / connections representative
  - “We need to have an understanding of what SHE Transmission’s approach to innovation is.” Infrastructure / engineering representative
  - “It’s not just the big suppliers, it’s little companies that are incredibly innovative. You should look to them for ideas.” Infrastructure / engineering representative



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## EXPERT SURGERY SESSIONS

After lunch, there was a Q&A panel session (see summary of the questions asked by stakeholders in Appendix 2). Following this, stakeholders were invited to attend one of the 'expert surgery' sessions hosted by a SHE Transmission representative. There were four sessions to choose from: connections; innovation; environment; and sustainability.

The connections surgery included a presentation on the connections process and sought feedback from stakeholders to supplement the existing consultation taking place in this area.

The other three sessions provided an opportunity for interested stakeholders to go into more depth on topics that had already been discussed during the morning session.

### Connections

The connections surgery was run by Alex Stuart, Customer Contracts and Investment Planning Manager. The key themes raised have been summarised under the headings discussed during the session:

#### Direct connections

- No one had experience of a direct connection, so there was no feedback on this area.

#### Embedded connections

- It was asked whether SHE Transmission would consider being a disruptor in this area.
- It was asked whether innovation in storage could help support the increase in low-carbon generation growth.
- It was felt that it was important to balance out grid supply points with generation now being embedded in the transmission system.

#### Applications process

- It was felt that pre-application discussions are vital for the successful completion of a project. This is because it helps with the planning and helps streamline the number of applications that need to be made.
- It was felt that discussions should be held before a pre-application fee is paid for a connection.
- There was a feeling that SHE Transmission needs to justify the payment for a connection.
- It was also felt that SHE Transmission are too cautious about providing the information on where the available capacity is.

#### Connections process

- Stakeholders felt that they wanted more visibility during the offer process.

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- Experiences of the connections process appeared to vary between stakeholders.

### **Future network growth and flexible connections**

- Stakeholders commented that the move towards a smart system will create the need for a lot more flexibility rather than the building of new network infrastructure.
- It was recognised that a bespoke solution makes it more difficult to maintain the connection.
- It was felt that there needs to be a balance between reliability and the need for flexibility.
- The suggestion was made that there should be a KPI on the amount of generation lost when there aren't any constraints on the network.
- The request was made for 'heat maps' that show supply points and available capacity to help developers.
- One stakeholder felt that now the subsidies have been reduced and the demand for connections had slowed, SHE Transmission should take more time to educate developers on the connections process.

### **Innovation**

The innovation surgery was run by David Paton, Technical Innovation Manager. The key themes raised during the discussion are listed below.

- It was felt that the current procurement process serves to stifle innovation. It was suggested that SHE Transmission's procurement process should include the requirement for innovation, as it was felt that contracts were currently primarily granted on the basis of cost.
- The point was made that SHE Transmission's procurement team tended to be made up of financial people, rather than engineers who would place more emphasis on the importance of innovation. It was suggested that the procurement team should be involved in the development of the RIIO-T2 business plan.
- It was noted that there doesn't seem to be joined-up learning between the other Transmission operators when it comes to innovation, with stakeholders calling for this to be rectified.
- One stakeholder questioned what the focus of innovation should be. It was felt that some business challenges would have more of an impact than others, which gave rise to the need to identify the biggest risks to the business – and the customer.
- The challenges of innovation were recognised by stakeholders, for example, other businesses benefitting from the financial rewards or the fact that the board may not be inclined to take the risk on investing in innovations that are too long-term.

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- It was felt that SHE Transmission tends to stick to traditional methods, rather than adopt new technologies – even those that have been available on the continent since the early 2000s. There was general agreement that SHE Transmission were slow to act in this regard.
  - Stakeholders felt that there are a lot of opportunities in Scotland to innovate in this area, for example, with marine power. They wanted to see new products commercialised and exported to a wider market.
  - Some stakeholders wanted to know whether there was a network map showing the location of grid constraints. Stakeholders who were aware of the existing map commented that it was often out of date or inaccurate and that it can be hard to find the right information.
  - It was highlighted that the grid connection process document was 1,000 pages long, and therefore not easily digestible.
  - One stakeholder felt that the DNOs and TOs were starting to be more inclined to consider active network management, which meant that it was becoming slightly easier to get a non-standard agreement. However, it was also noted that more work needed to be done in this area.
  - There was support for some minor derogations of criteria from Ofgem in recognition that innovation funding is being removed.
  - It was questioned whether SHE Transmission felt prepared to drive forward the radical changes that the Scottish Government wanted to see in the energy sector, such as climate change targets.
  - One stakeholder asked how Ofgem would measure innovation targets for Transmission operators.
  - One contractor felt that they had worked with SHE Transmission to drive forward some excellent innovations, for example, subsea cables, but it was felt that more needed to be done to promote these innovations to a wider audience.

## Environment

The expert surgery on the environment was run by Richard Baldwin, Head of Environment. The key themes raised during the discussion are outlined below.

- There was interest in whether ester fluid could be retrofitted into old transformers, although there were questions around the cost of draining existing transformers.
- Stakeholders wanted to understand the Scottish Government's plans to continue to support the growth in renewables post-incentives (i.e. the feed-in tariff).
- It was commented that a new KPI should be introduced for RIIO-T2 that measures network outages and the amounts of CO<sub>2</sub> emissions involved.

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- There was interest in the role of gas in delivering home heating, as it was felt that gas would never be a truly carbon-neutral source of energy.
  - Stakeholders were also interested in the opportunity for large-scale battery storage.
  - The point was made that SHE Transmission needs to ensure that its contractors buy into the company's environmental commitments, as they are the ones principally involved in delivering projects on the ground. It was felt that this was particularly relevant for smaller-scale projects, which are sometimes not given enough attention in planning terms.
  - Stakeholders supported the proposal to produce an environmental toolkit for contractors, but wanted to be consulted on its contents prior to roll-out.
  - One environmental group representative supported SHE Transmission's existing stakeholder panels, but urged them to get wider regional stakeholder input on environmental targets.
  - One stakeholder highlighted the existence of the Renewables Grid Initiative, a partnership of NGOs and renewables across Europe.
  - The comment was made that SHE Transmission only tends to look at undergrounding at the mitigation stage, rather than the route option stage.
  - It was questioned whether SHE Transmission could undertake more Strategic Environmental Assessments, as they help to screen issues in advance.
  - A stakeholder asked whether SHE Transmission undertakes any monitoring in relation to bird collisions.
  - Another stakeholder asked what SHE Transmission does in terms of interacting with sites of historical and cultural significance.
  - Stakeholders were interested in the implications of the Scottish Government's new planning bill.
  - There was a desire to see quality engagement with local communities ahead of SHE Transmission's projects – particularly with harder-to-reach groups, such as young people.

## Sustainability

Alex Sutton, Sustainability Manager, ran the sustainability surgery session. The key themes raised during the discussion are outlined below.


- There was a desire to see a 'Supply Chain Sustainability School' to educate and encourage collaboration among industry suppliers.
- The point was made that SHE Transmission's procurement process was largely based on price, which could hinder opportunities to enhance sustainability.

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- Stakeholders supported SHE Transmission's ambition to tackle Scope 3 emissions. To achieve this, they felt it was important to first identify where these come from.
  - There were calls for transparency, as it was felt there could be some double-counting, as companies that report Scope 3 emissions will also be reporting Scope 1 and 2 emissions.
  - The high carbon cost of electrical losses was seen to be significant.
  - The importance of considering the whole life-cycle cost was stressed, particularly in terms of the responsible sourcing of materials.
  - Stakeholders stressed the importance of engaging suppliers. It was questioned how much control SHE Transmission has in terms of encouraging suppliers to reduce Scope 3 emissions or consider life-cycle costs. Stakeholders were also interested in possible mechanisms that could be used to encourage progress in these areas.
  - The point was made that the responsible sourcing of materials should cover social as well as environmental responsibility. It was felt that this should include the need for contractors to be sustainable employers, paying the living wage, for example.
  - It was felt that SHE Transmission should strive to ensure that they address the skills gap in the industry by delivering training and promoting diversity in the workforce.
  - It was felt that SHE Transmission should promote the industry to schoolchildren as part of its engagement on community schemes.
  - It was noted that more needs to be done to ensure that distribution and transmission promote the 'same message' when it comes to employment and skills.

## APPENDIX 1: FACILITATION PROPS

### WORKSHOP TWO: OUR SUSTAINABILITY INITIATIVES

The image below shows the facilitation prop for the 'optimising resources' section of the Sustainability Initiatives session. Stakeholders were asked to vote for the performance commitment they thought should be prioritised under each area. The data was tabulated and is displayed in questions 1,2 and 3 of Workshop 2 in this report.

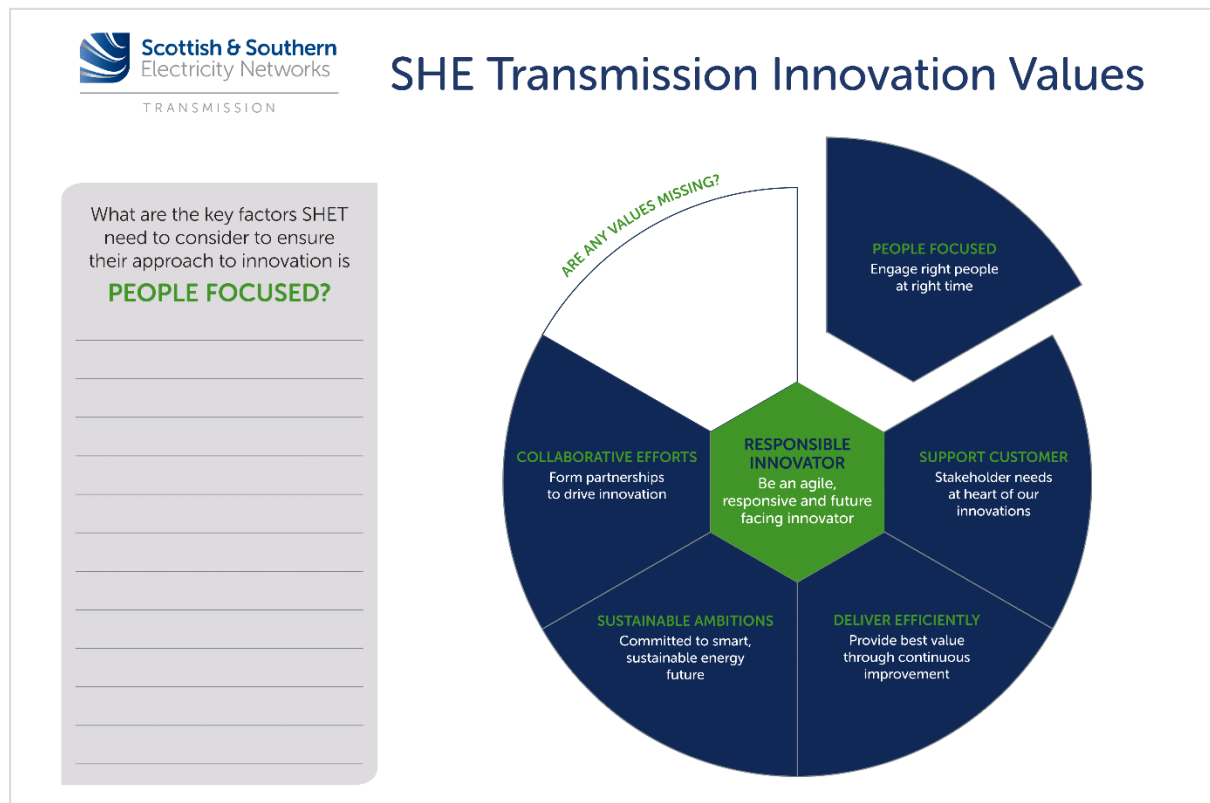


## Sustainability Strategy: optimising resources

PERFORMANCE COMMITMENT	VOTES
Minimising waste	
Reduce waste generated	
Increase the percentage of waste recycled	
Zero waste to landfill (excluding compliance wastes)	
Reduce single-use plastics waste	
Other – please state	
Reducing resource use	
Reduce material use (e.g. steel, aluminium and copper)	
Reduce water consumption (m3)	
Reduce carbon content of construction projects	
Reduce chemical use	
Other – please state	
Promoting sustainable materials	
Materials recycled content	
Life Cycle Assessments (carbon / environmental impact)	
Responsible sourcing of assets (standards / initiatives)	
Other – please state	

## WORKSHOP FOUR: OUR INNOVATION STRATEGY

There were five different versions of the innovation values facilitation prop, reflecting each of the five values. The image below shows an example for the 'people focused' value. The prop was used to guide discussion, and the responses were recorded as verbatim comments and are summarised in Workshop 4 of this report, beginning on page 41.





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## APPENDIX 2: Q&A

### Questions submitted during Q&A

After the discussion sessions, there was a short Q&A with Dave Gardner, Director of Transmission at SHE Transmission, and Simon Gill, Energy Engineer at the Scottish Government. The questions asked by stakeholders are listed below.

**Question:** Why aren't transmission and distribution activities vertically integrated to benefit the end user? Should Ofgem be lobbied to support this?

**Question:** Can you retrofit synthetic ester in old transformers?

**Question:** How are generators compensated if they are constrained for commercial forestry operations in proximity to existing overhead lines?

**Question:** The Scottish Government and SSEN want to grow renewable technology and installing. The feed-in tariff is ending at the end of March next year, how will you encourage that once it's gone?

**Question:** For RIIO-T2, should we introduce a KPI for recording renewable energy lost as a result of network outages, or the amount of CO<sub>2</sub> emissions that will be emitted by taking zero-carbon energy off the system?

**Question:** In terms of being 50% renewable energy in 2030, this aim is for more than electricity. How much would it take for heat, gas and electricity?

**Question:** What role do you think battery storage will play in the transition? How far away are we from realising that?

### Questions submitted via tablets

Throughout the event, stakeholders were able to ask SHE Transmission questions via tablet, to be answered during the Q&A. Due to time constraints, some questions were not answered. These are noted below.

**Question:** "What can you do to ensure you provide current and accurate network information to your stakeholders, including developers and operators? Currently, the information available is not accurate enough."

**Question:** "How do you manage stakeholder expectations in relation to their influence on your business plan when their feedback differs greatly from what you want to do, can do, or refers to areas of delivery that are determined by regulation?"

**Question:** "Why were 17–18 operational emissions so high compared with 16–17?"

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**Question:** “What impact do overhead lines have on bird populations?”

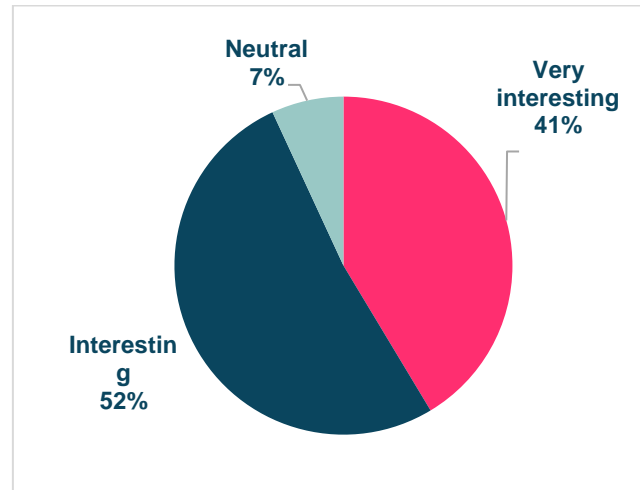
**Question:** “How will the DSO model impact SHE Transmission?”

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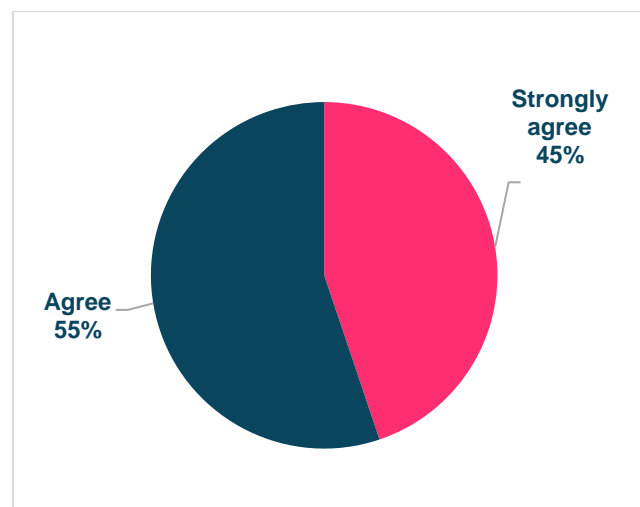
## APPENDIX 3: WRITTEN FEEDBACK

After the workshop, stakeholders were asked to complete a short feedback form. The feedback was as follows:

### 1. Overall, did you find this workshop to be:



### 2. Did you feel that you had the opportunity to make your points and ask questions?

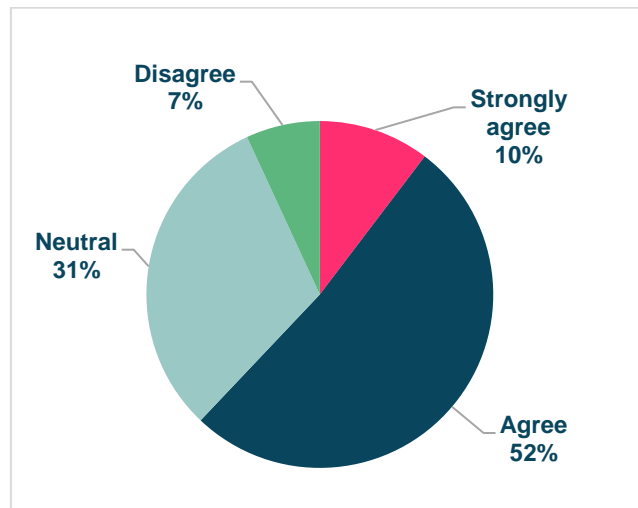


### Comments

- “Table discussions were very useful and informative. The electronic voting after each discussion was also very interesting.”
- “Excellent.”
- “Good facilitation of discussions.”

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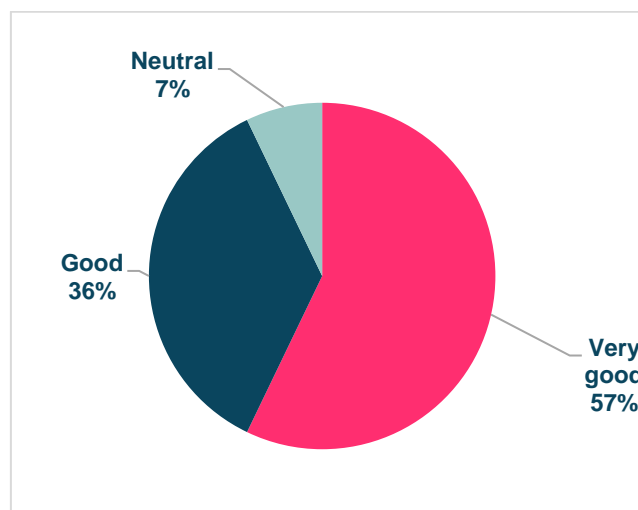
### 3. Did we cover the right topics for you on the day?



#### Comments

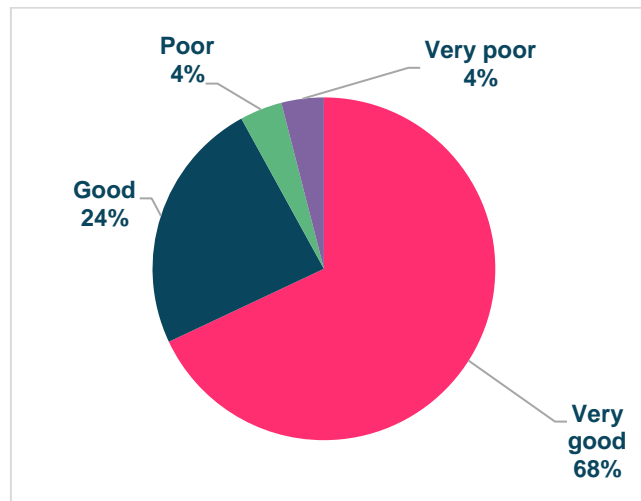
- “More on whole system.”
- “It was a bit too broad.”

### 4. What did you think of the venue?



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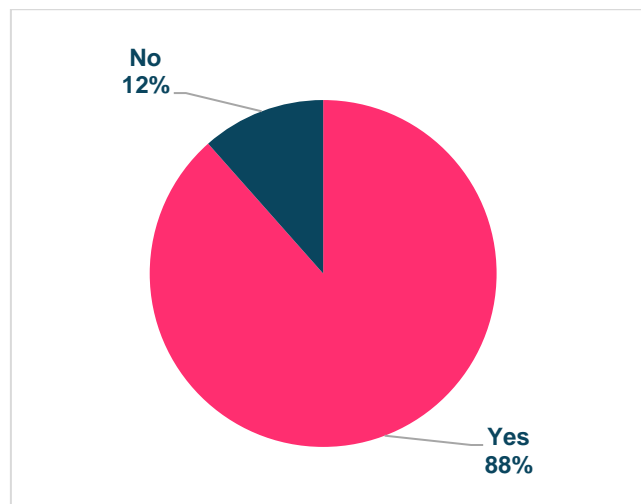
**5. What did you think of the way the workshop was chaired by your facilitator?**



**6. Any other comments?**

- “The tablets were useful to refer back to presentation slides, and for audience interaction.”
- “Very good organisation and interesting topics.”
- “Very informative day. Look forward to further engagement.”

**7. Would you like to receive our post-event report and invites to similar events in the future?**





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