

SSEN TRANSMISSION STAKEHOLDER WORKSHOP

MARCH 2018

INTRODUCTION

On March 8th 2018, SSEN Transmission hosted a stakeholder workshop to seek feedback on its future investment plans.

The format for the workshops comprised three short presentations given by SSEN representatives, followed by roundtable discussions and a Q&A. The broad topics for discussion were: SSEN's current performance: Stakeholder engagement and reporting; and Planning for the future.

SSEN instructed EQ Communications, a specialist stakeholder engagement consultancy, to independently facilitate the workshops and to 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 each stakeholder represents.

The full presentation can be found **here**, with the agenda for the day on slide 4.

EXECUTIVE SUMMARY



After a brief introduction from Alec Morrison, Customer & Community Manager, there was an initial 'ice-breaker' session where stakeholders were asked to consider the three conflicting themes that make up the 'energy trilemma': Cost; Environment; and Reliability.

Each stakeholder was asked to place a sticker on a board denoting where they viewed SSEN to be in terms of the energy trilemma at present. Later in the day, after learning more about the company's future plans, they were asked to revisit this, placing another sticker according to where they believed the company would be in 2030.

- Stakeholders felt that, at present all three factors are significant, albeit with Reliability as, marginally the most important.
- In 2030 it was felt that there would be a move away from Cost and Reliability towards the Environment as the most important factor.

Colin Nicol, Managing Director then gave a short presentation to explain the purpose of the day, after which Dave Gardner, Director of Transmission, explained the company's background and history and gave an update on SSEN's current performance. There was then a roundtable discussion where stakeholders were asked to give their views on SSEN's performance and to identify areas for improvement.

 SSEN received broadly positive feedback. The company was praised for its collaborative approach and its knowledgeable staff. Operational staff, particularly, were singled out for their good work in the community and it was noted that stakeholders value being able to pick up the phone to someone they know when there is an issue. • There was some criticism for how the company communicates on internally and that this makes it difficult, at times, for stakeholders to access information.

The next session was introduced by Alec Morrison. He explained the different methods SSEN employs to engage with its stakeholders. After this, there was a roundtable discussion where feedback was sought on how stakeholders would like to engage with the company in the future.

- Stakeholders see SSEN Transmission as being proactive in its approach to engagement across a range of channels.
- It is clear that face-to-face engagement with the company is the most valued method, whether it is one-to-one meetings, stakeholder workshops or public exhibitions in areas where work is planned. There was limited support for the company's social media strategy but it was accepted that, at times, this is an important method of communication.

Michael Blake, Performance Manager, introduced the next session with a presentation on how SSEN reports its performance and its proposed Key Performance Indicators. Stakeholders were then asked to give their feedback on this.

- Whilst some stakeholders saw the value of the Transmission Performance Report, this
 was not the case for all. It was commented that the report could be clearer and more
 accessible.
- Although stakeholders saw the need for KPIs, it was noted that they are perhaps of more relevance to the regulator than to customers. It was also felt that there should be more KPIs associated with the company's Corporate Social Responsibility.

After a short break Aileen McLeod, Head of Business Planning and Performance, presented a session entitled: 'What next for SSEN?'. Stakeholders were then asked to comment on which factors they saw as important in determining the activities of the company in the north of Scotland after 2020.

- A range of factors were put forward as being significant in determining SSEN's future activities. In terms of the energy network, these included: the transition to DSO; advances in battery storage; the capacity of the network; the increase in the uptake of electric vehicles; active network management; and the electrification of heat.
- Other factors were also cited as being important. These included the UK's ageing population and the will, or at times lack of will at times, on the part of the Government to encourage the take-up of renewable energy.

The final discussion session of the day was again introduced by Aileen McLeod. Following an explanation of some of the conflicting factors which impact upon energy bills, stakeholders were then asked to rate each of them and explain the reason for their choices.

- When stakeholders discussed this as a group, reaching a consensus position, it was felt that Security of Supply was the most significant factor, followed by Cost to Customers and Environmental Impact.
- These outcomes were mirrored when stakeholders were asked to score these factors individually with Economic Impact, Impact on Local Communities and Consequences for Staff in fourth, fifth and sixth position, respectively.

Before lunch, a short Q & A was hosted by Dave Gardner. Questions centred on the challenges that the company had faced in recent years and the work that SSEN was doing to facilitate a smarter network.

ATTENDEES

A total of 57 stakeholders attended the workshop, representing 44 companies. The companies represented on the day are shown below:

ABB Ltd Morgan Sindall

ABO Wind UK Ltd Omexom

Amey Muirhall Energy

Argyll and Bute Council Natural

Network Rail **Balfour Beatty**

Perth and Kinross Council Balfour Beatty Power T&D

PLPC Ltd Bam Nuttall

Citizens Advice Scotland Power System Partners Ltd

Coriolis Energy RES

Crown Estate Scotland **RJ McLeod**

Davidson & Robertson Savills / Airvolution

DNV GL Scottish Fishermens Federation

Dundee City Council Scottish Government

EDF Energy Renewables Siemens

EFACEC Energia Siemens Transmission & Distribution

Limited Electric Vehicle Association Scotland

SP Energy Networks Element Power

Spey District Fishery Board **Energy Networks Association**

SSE Generation Energyline Ltd

Scottish White Fish Producers Association Eon Ltd

Falck Group TNEI

Fred Olsen Renewables Vattenfall

Local Energy Scotland

OUR PERFORMANCE TO DATE

The first discussion session was introduced by Dave Gardner. After which, stakeholders were asked to comment on SSEN's performance and to suggest possible areas for improvement. The presentation can be found $\underline{\text{here}}$, slides 8-18.

SUMMARY



Stakeholders gave generally positive feedback on their perception of SSEN Transmission, citing the company's competent and knowledgeable staff. Many stakeholders gave examples of the team's good local knowledge and the speed of resolution of problems. The company was also commended on its success at meeting performance targets and heartfelt safety culture.

Where problems were highlighted, they largely focussed on communication, both within and the company and externally. There was a perception that different parts of the organisation do not successfully communicate internally and that it is often unclear who customers (both individual and business) should be contacting. Other issues that surfaced included delays in plans due to tight regulations and a broader view of the company as being conservative in taking up new technologies.

1. What is your perception of SSEN Transmission?

"The unsung heroes are the people, their operatives, who are very collaborative, helpful and open. They're local too and they know the areas." Infrastructure / engineering representative

"The current framework makes it easy to sort out any issues that we have had with the electricity network." Energy / utility company

"SSEN transmission has been very reliable locally and have been very communicative with the local community." Local authority representative

"We're impressed by the quick turnaround of SSEN projects. In one of the projects we were involved with, the target turnaround of 3 months was accelerated." Developer / connections representative

"My experience with SSEN ranges from excellent to horrendous!" Developer / connections representative

"People at SSEN want to help you." Developer / connections representative

"As a customer, you have specific points of contact, there is always someone available and the communication is very good. These events help that. They help to smooth out any problems. It's a shame that you can't get distribution and transmission in the same room together!" Energy / utility company

"SSEN are a good collaborative customer. We know who to talk to. We have open access to senior management." Infrastructure / engineering representative

"I think SSEN's environmental approach is streets ahead of elsewhere in the UK." Developer / connections representative

"SSEN have a good safety culture. It is one of the companies in the industry that is a leader. They hold meetings to deal with health and safety issues and other companies are adopting this." Infrastructure / engineering representative

"SSEN don't have a clear account manager. It could be beneficial to have one point of contact in the company." Infrastructure / engineering representative

"Our hubs have been delayed by at least 6 months because the two companies can't talk to each other. We've really struggled to get SSEN to realise that we have customers with electric vehicles who need infrastructure now. They're inflexible. It's challenging." Local authority representative

"We have a contract with SSEN via Scottish Power and National Grid. There were no problems talking with National Grid or Scottish Power, but they won't talk to each other. The communication was very poor. Getting the companies to talk to each other would be really helpful." Energy / utility company

"In terms of plans of expansion, my take is that they are not ambitious enough. Transmission connection, in particular on the west coast, is dire and the waiting times to get a connection on the west coast are killing projects and ambition." Land owner representative

"In terms of improvement, when you compare and contrast with other companies, they are quite conservative in exploring and implementing new technology." Infrastructure / engineering representative

"SSEN tend to make decisions through committee rather than on an individual basis, which elongates the time frame for an answer. Sometimes there's no answer at all." Infrastructure / engineering representative

HOW WE ENGAGE WITH OUR STAKEHOLDERS

This discussion session was introduced by Alec Morrison. After his presentation, stakeholders were asked to review and comment on SSEN's engagement activities, including their Openlines newsletter. The presentation can be found <u>here</u>, slides 19 - 28.

SUMMARY



In general, SSEN Transmission were perceived to have a proactive and reliable approach to stakeholder engagement. More specifically, face-tomeetings stakeholder face and workshops received the most consistently positive feedback. These methods of engagement were seen as a useful and efficient way of resolving problems, although evidently

accessible to all customers. There was also a desire to see a more tangible attempt by SSEN to deliver on the suggestions made by stakeholders at events.

Most stakeholders had not seen the Openlines newsletter before but there was general interest in having an online version made available. Several stakeholders emphasised that there would be more palpable interest if the newsletter broke down information for particular sectors.

Stakeholders widely saw the website as very informative in its current form. They were more ambivalent towards SSEN's social media strategy, largely agreeing that it is not the way in which they would usually choose to engage, although there was some suggestion use LinkenIn more as a platform. Similarly, virtual meetings received a mixed response. Though acknowledged for their usefulness in enabling SSEN to engage with stakeholders in remote areas, there was a worry that they could discourage face to face meetings.

1. How well do you think SSEN Transmission engage with their stakeholders?

"Across the board SSEN are very good at communicating, particularly at these events." Developer / connections representative

"SSEN Transmission creates a link between contractors, local communities and local councillors. This helps us to keep in contact with stakeholders." Infrastructure / engineering representative

"Compared to the other utilities in the UK, SSEN Transmission are leading the way in stakeholder engagement." Business representative

One-to-one meetings

"It would be useful to have more one-to-one meetings." Infrastructure / engineering representative

"SSEN do it very well. Our guys have lots of good access at all levels. We know we can pick up the phone to senior leadership and they will be accessible." Infrastructure / engineering representative

"Can we have a regional contact for informal chats? At pre-application stage, it would be useful to have a contact so we can get in touch with a quick question that isn't specific to an account manager." Business representative

"We do not get sufficient follow-up after meetings. We took part in a survey and were promised results but did not receive them." Infrastructure / engineering representative

"It was not difficult to find correct person within SSEN but it was difficult to obtain a response when I contacted them." Business representative

"In terms of engaging with communities, SSEN are doing a good jo. However, they need to act on feedback from these events. Locally, SSEN are perceived as very reliable with good customer engagement." Energy / utility company

"Our constituents are quite eager for people at local events to be technical people within SSEN to answer technical questions. SSEN will need to reflect on and address who they bring in to these events so that it doesn't seem like a box-ticking exercise." Local authority representative

"Coming to these sorts of events is a big demand when you have a small team." Developer / connections representative

"If there was an online calendar to show where SSEN Transmission are planning to hold local discussions it would make it easier." Developer / connections representative

Website

"I use the website quite a bit and it's easy to use." Infrastructure / engineering representative

"I think the website's good but don't ask me about Twitter or Facebook – I think that's my age! But the website with different sections and attachments for events is great and easy to use. There's enough that people need to know without going into too much detail. It's carefully worded, as it should be." Infrastructure / engineering representative

"It's the first port of call for information, though it can be hard to navigate." Government body representative

"The website is not really for contractors, but for the public, and it's come a very long way." Infrastructure / engineering representative

"Make sure relevant people are listed on website and reiterate the importance of responding to queries." Business representative

"I tend to go on website for project information. Sometimes it is mis-matched. It should be more up to date." Infrastructure / engineering representative

Social media

"I already feel bombarded on social media" Developer / connections representative

"I'm surprised to see that LinkedIn isn't included in their social media plan." Infrastructure / engineering representative

"Social media is dominated by customer care. It is too retail based to contact the relevant person." Business representative

"You can't rely on social media in these remote places. Indeed, there is occasionally no signal." Business representative

Openlines newsletter

"I view the Openlines newsletter as an internal newsletter that has accidently been sent out to stakeholders." Business representative

"It is unclear as to who the intended Openlines newsletter's audience is." Infrastructure / engineering representative

"Different audiences will want different things from the newsletter. If SSEN split their information into separate, focused sections then I would be able to find articles that are more tailored to my interests." Business representative

"We don't receive it, but for us it's the kind of thing that's really useful because we're not always aware of a lot of the investment decisions." Voluntary sector representative

"The newsletter should include information on progress with the update works. For example, when things come online, any delays; that sort of thing." Developer / connections representative

"I'm looking for it to be telling me what's happening, an overview of what's planned to happen with some numbers attached." Land owner representative

"A quarterly newsletter delivery via e-mail would be fine. A hard copy isn't necessary." Developer / connections representative

"I never knew about the newsletter." Developer / connections representative

2. Are there any industry groups SSEN Transmission should be aware of and participate in?

"Scottish Estates and the National Farmers Union. You should look to engage with these." Business representative

"Electric Vehicle Association Scotland and Transport Scotland." Business representative

"ÉCOS." Business representative

"The ENA is the obvious one." Energy / utility company

"Scottish Renewables." Developer / connections representative

"Offshore Wind Industry Group – OWIG" Land owner representative

REPORTING

The discussion session was introduced by Michael Blake. After his presentation, stakeholders were then asked to review and comment on SSEN's Transmission Performance Report as well as the company's proposed Key Performance Indicators. The presentation can be found **here**, slides 29 – 33.

SUMMARY



Very few stakeholders had seen the Transmission Performance Report before the workshop. When shown it, there was a mixed response to how useful it could be. Some saw it as interesting and high-level whilst others viewed it as pointless and aimed at an internal audience. Stakeholders, in general, believed that, to be more engaging, the documents would need to be clearer, more transparent and more

accessible, although the presentation of the document, as it is, was generally praised.

Many of the KPIs were seen as meaningless to anyone other than SSEN and OFGEM. It was commented that they were seen as internal checks and balances rather than suited to an external audience. It was added that more information on budgets, deadlines and the amount of MW connected would be of use.

It was also noted that stakeholders wanted to see change over time, and the fact that all the measurements are lag not lead, so were of no use in future planning. It was pointed out that different types of stakeholders will want totally different information and this was reflected in the numerous wide-ranging suggestions for additional KPIs that SSEN could report on.

1. Have you seen the Transmission Performance Report before and would this be of use to you?

"They're useful, I do use them in my work." - Infrastructure / engineering representative

"So many companies produce annual reports. It would make it easier for me if you emailed me a copy or a link to the PDF. Then it would be more accessible." Local authority representative

"A lot of these are lagging indicators. Tell us what will influence the future, not show us the past. This is lead vs. lag and I think lead is of more importance." Infrastructure / engineering representative

"It seems a bit too congratulatory. The key thing missing is quality. Your outage assessment says why, not how well, a job is done." Business representative

"It is visually appealing and user-friendly." Infrastructure / engineering representative

2. Are these the right KPIs to measure the quality of service SSEN Transmission provides to customers / stakeholders?

"Just being cynical, it looks like lots of ticked boxes, but I really want to see what actions SSEN are going to take." Infrastructure / engineering representative

"A lot of this is internal, it's being done because it's a licensing condition that they have to do, these KPIs are of interest to OFGEM. I wouldn't pretend this is of great interest to me." Land owner representative

"Let's not pretend that what is of interest to the regulator is going to be of interest to the wider audience." Land owner representative

"It depends on the audience. It's impossible to please everyone all of the time." Infrastructure / engineering representative

"There should be different sets of reporting for OFGEM, shareholders and stakeholders, with different performance indicators for engaging different sectors. You cannot provide one set of KPIs that is useful for everyone. These KPIs are most important for SSEN. You should also have 'PIs', not just KPIs that are for different parts of the business and report it to that sector." Infrastructure / engineering representative

"I think having something on the ambitions of the company for the next five years will help us better understand the future of our collaboration." Infrastructure / engineering representative

"The tangible figures in the report are useful but it would be good to see it over time, along with a justification of costs." Voluntary sector representative

"I'd like to see more on innovation. I don't know how you'd measure it but something showing the drive towards innovation would be good." Voluntary sector representative

"They all seem to be obvious. It's a bit, 'low-hanging fruit'." Infrastructure / engineering representative

3. Are there any that should be removed from the list?

"This is harsh but most of this is of tangential interest to me at best. MW vs. plan is probably interesting but the rest of it doesn't make much of a difference to me. By the nature of the measurements included it's backwards looking. It doesn't give me much future-looking information and that's what I really want." Land owner representative

4. Are there any other measures that SSEN Transmission should include?

"I might expect to see more information on Corporate Social Responsibility measures to aid stakeholder engagement in the future and then create targets to meet in the future." Infrastructure / engineering representative

"I'd like to see information on health indices, critical indexes, reliability, asset management, your use of data and progress in adopting new technologies." Infrastructure / engineering representative

"In terms of the environmental benefits of SSEN developments, it would be good if you could provide information that is accessible about emissions." Local authority representative

"It would be more insightful for us if there was information on future projects rather than detail on past achievements. Give us an insight into what is in your plan, so we can tailor our calendar to account for it." Infrastructure / engineering representative

"There's something missing in terms of customers and engagement. A KPI relating to how you identify and respond to issues, such as delays in projects would be helpful. As well as deadlines with complaints." Government body representative

"Innovation in connections. It would be good to include an indicator of how designs are being used to reduce costs, for example hybrid wind farm solutions." Developer / connections representative

"There should be an indicator related to how many MWs of generation are lost by outages." Developer / connections representative

"It would be good to know about energy shipping. And the carbon intensity of SSEN's activities. Decarbonisation of electricity is an important factor." Developer / connections representative

"There should be an indicator relating to environmental incidents throughout the network. Certain environmental incidents aren't reported under KPIs, which is wrong and misleading." Energy / utility company

"Other sectors report on social impact; it would be good to measure the proportion of graduates, trainees, apprentices, etc." Infrastructure / engineering representative

"Is it shown how many projects were over budget? There should be indicators of budget and time." Business representative

"MW connected in year would be interesting to me along with geographical information on what went where, the number of submissions made and the time taken for those to be decided upon." Business representative "Number of applications received and accepted. It's not a KPI because SSEN is not looking to increase it because they want to make the right decision. It is interesting, and it's worthwhile for me to know." Land owner representative

"There needs to be a KPI for renewing equipment." Infrastructure / engineering representative

"A measure of cost per MW for connections would be good to publish." Developer / connections representative

5. How should SSEN Transmission report these KPIs to their stakeholders?

"I would like to see the formalisation and measurement of the KPIs to make the information more accessible. i.e. heatmaps." Infrastructure / engineering representative

"Open data, everything on the cloud. The public want to know what's being done." Local authority representative

"It is OFGEM's responsibility to report back. It is not SSEN's." Energy / utility company

WHAT NEXT?

The discussion session was introduced by Aileen McLeod. After her presentation, stakeholders were asked to give their views on the main factors that they saw as determining the activities of electricity transmission in the north of Scotland after 2010. The presentation can be found **here**, slides 35 - 43.

SUMMARY



Stakeholder views on the future diverged far more than in other discussions. As such, there was a greater breadth of suggestions and predictions than on other topics.

There was unanimous agreement that demand for energy will rise and that wind power will be of greater importance. Beyond that, common themes included: the likely

increased uptake in electric vehicles; storage and embedded generation; environment; and the capacity of the network. Factors such as an ageing population and the removal of subsidies for renewables by Central Government were also seen as important.

Stakeholders were generally surprised that hydro power is not more widely used as an energy resource. It was commented by some that offshore wind floating tidal power projects and currently not viable as they are not located close to population centres and that battery storage is also unviable due to cost.

Plenty of stakeholders saw electric vehicles as the transport of the future and agreed that SSEN should build this prediction into their future plans. This was seen to have a knock-on effect, alongside the drive for green energy, battery storage and network capacity.

On a broader note, several stakeholders commented on the need for diversification of the network and thought SSEN should do what they can to facilitate the take-up of new technologies. Similarly, Scottish and UK Government policy was seen as being central to how SSEN would be able to shape its future approach on renewable energy. Several stakeholders also put forward the idea that SSEN should be working harder to define policy with OFGEM, rather than just be influenced by it.

1. What do you think are the main factors that will determine the activities of electricity transmission in the north of Scotland after 2020?

Capacity

"Is there is enough capacity for new initiatives? I'm not so sure." Local authority representative

Storage

"We should be looking to integrate storage with wind farms. We don't see storage as a standalone solution." Developer / connections representative

"There's no market for storage. It's not tenable for the commercial market. The cost of providing the batteries isn't commercially viable." Developer / connections representative

"I would imagine throughout the UK; the north of Scotland's got the biggest potential and that's going to mean different things. Storage is going to be a problem." Business representative

"One thing is certain, and that is that power demand will rise. Pumped storage is vital, and it's the most economically efficient way of storing energy and making it available." Infrastructure / engineering representative

"Storage could play a big part." Infrastructure / engineering representative

Wind

"SSEN should be cautious of floating tidal power schemes and off-shore wind generators as it isn't really cost-efficient. It would be more beneficial economically to generate energy closer to population centres." Local authority representative

"Once we see the decline of the Hunterston and Torness then will we see significant pressure back on off shore wind-turbines." Business representative

"As the likelihood of new nuclear power stations being built is low, there will be an increased trend of us relying on off-shore wind." Business representative

"If we are going to exploit offshore wind, fixed or floating, SSEN will need another connection point on the West of Scotland apart from Hunterston. The only point of contact that enables transmission in the west of Scotland is in Hunterston which is in Scottish Power's area, not in SSEN's. This means it is a non-developable area but that's where all the resources for offshore wind are." Land owner representative

Government

"The Scottish government is very supportive of onshore wind, and this is going to continue with even bigger turbines. The problem is the Westminster Government saying they've run out of money for wind. And then there's the question of what will happen after Brexit." Developer / connections representative

"Instead of being a policy taker all the time you've got to help drive the policy forward much better." Land owner representative

Environment

"I discount the benefits of tidal energy generation as the amount of energy that can be generated is limited." Business representative

"We're now in an era of hydropower, some of which is underpinned by Acts of Parliament." Business representative

"Looking forward to 2030, the news is saying that gas is under threat, and so the cost of natural gas will simply increase, just like petrol." Infrastructure / engineering representative

"I'm optimistic about renewables in a zero-subsidy world, higher tips, more turbines, higher capacity and output." – Developer / connections representative

"The installation of solar panels in Cornwall has revolutionised the generation and supply of power. No one anticipated the power of localised power generation schemes, and how to handle the significant amount of energy they subsequently create." Energy / utility company

"More and more people are taking advantage of solar and smart technologies but the people who can't afford it are footing the bill. Because the people with solar panels still need the network as backup." Voluntary sector representative

Electric Vehicles

"One of the main factors that will determine electricity transmission is the increased promotion of electric vehicles. If we go down the route of autonomous vehicles, the amount of people who drive daily will reduce." Business representative

"Electric vehicles will be very important after 2020 and will pose problems. It will be worth considering a DC higher voltage power supply, and this will have a huge impact." Developer / connections representative

"The issue is that the existing infrastructure just can't handle electric vehicles, and the network can't cope." Developer / connections representative

"Imagine the fact that we are going to have to supply the Highlands with charging points." Infrastructure / engineering representative

"We could end up with a HS2-type moment where the existing system can't cope, and so there is a need for a new one, which will be DC, not AC. This is a fundamental change as that spells the end for transmission." Infrastructure / engineering representative

"You'll see an uptake in electric vehicles, but you'll see a different uptake geographically." Infrastructure / engineering representative

Demographics

"People will live longer, healthier, lives so there will be a greater requirement for warmth. The situation in urban areas will be different to those rural areas." Local authority representative

Heating

"The consensus is that vehicles are much easier than heating. Heating infrastructure is too complex." Developer / connections representative

"If we engage with the electrification of heat at a community scale it can be really significant. The use of District Heating will have significant benefits to energy management." Business representative

"The point was made that 50% of the heat source may be electrified but by 2030 I think that's ambitious. The Scottish government have ramped down their ambitions because electric heat pumps are very expensive so people aren't choosing them." Voluntary sector representative

Other

"DNO to DSO transition. That's the big issue on the horizon" Infrastructure / engineering representative

"If you look at areas like Denmark and Germany, we can see how they are involved with energy sharing across boundaries. Scotland could relay power to other countries." Energy / utility company

"There is a strong direction in latest OFGEM document about RIIO, focussed on carbon generation. The regulator will drive innovation and whether this continues beyond 2028 is important." Infrastructure / engineering representative

"The network's just getting older, a lot of the infrastructure now is 60-70 years old, coming to the end of its natural life, to replace them it's expensive, digging up the streets." Infrastructure / engineering representative

2. Which is the most significant of these factors?

"I think it's the demographics. The youth. My children are really interested in the environment and where we're getting renewables. Whereas older consumers are interested in costs." Local authority representative (elected)

"When it comes to the masses I think costs are the main driver." Infrastructure / engineering representative

"I think in wind there'll be a lull due to lack of subsidies but it's going to kick off again in the future." Infrastructure / engineering representative

"In 10 or 20 years, subsidies for wind will be drying up and we will need better connections to offshore and onshore wind. It's important for SSEN to try and have an influencing factor in these sorts of things." Government body representative

3. Has SSEN Transmission missed anything?

"Wind turbine incentives at 70MW." Developer / connections representative

"Pumped heat energy storage offers instant demand for storage. The new technology can be an interesting new pathway for SSEN. It will have a significantly smaller footprint than any of the other energy generating options." Business representative

"Active Network Management is more than an element of the Smart Grid. Once you incorporate DSO then you are engaging with energy generation and storage on a much bigger scale." Business representative

"I'm not so sure if that electrical vehicles are going to be definitely be the solution. What do we do with batteries at the end of their life? It's major problem so I'm not sure that this demand cause by electric vehicles is going to be such a problem." – Energy / utility company

"Hydropower has always been the poor relation to wind and solar as it has never had as much support." Infrastructure / engineering representative

"Developers want a specific CFD to buy into a project. They need the government to promote renewable energy more." Infrastructure / engineering representative

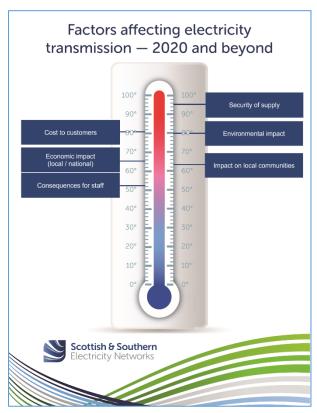
A SUSTAINBLE BUSINESS



The final discussion session was also introduced by Aileen McLeod. After the presentation, stakeholders were asked to rate the following factors affecting electricity transmission: Cost to Customers; Impact on Local Communities; Economic Impact; Environmental Impact; Consequences for Staff; and Security of Supply. They were asked to explain their reasons during the discussion sessions. They were also asked to individually score each one out of ten to give quantitative feedback. The presentation can be found here, slides 44 – 50.

SUMMARY

When stakeholders were asked to decide, in groups, which was the most significant factor, Security of Supply was deemed the most important, with Cost to Customers and Environmental Impact in joint second position. Interestingly, this result was mirrored at the end of the discussion session when stakeholders were asked, individually, to score each factor in terms of importance, as can be seen in the table on page 23.



A key area of disagreement was over cost. Some participants, especially local authorities and voluntary groups, thought it was important to ensure that fuel poverty did not increase, whereas others thought it was much less important due to the inevitability of costs increasing. These stakeholders argued that costs would go up no matter what, but that it would be better to invest now to maintain and improve the network and prepare for the future.

One area stakeholders could agree on was security of supply, which was viewed as critically important. It was agreed that we would be more dependent on electricity in the future. Stakeholders viewed the environment as of growing importance as the public are becoming much more conscious of environmental issues, although they didn't want to see the impact on their

bills. It was commented that environmental impacts need to be taken into consideration so that communities are not affected in order to benefit those elsewhere in the country.

Similarly, consequences for staff in terms of paying living wage and employing local workers was seen as good to do morally, but less important than other factors.

Cost to customers

"As a domestic customer, I would say that cost is the most important factor." Energy / utility company

"Somebody's going to have to pay more, and with so many people in fuel poverty that's a very political choice. The cost to business will go up in the short term too." Infrastructure / engineering representative

"Politically, the cost to customers has not been a prime concern. However, this is changing as it is becoming increasingly difficult for people to meet costs." Local authority representative

"If people have to pay 10% more for electricity or stop using it, they are more likely to choose to pay that bit more for their electrical consumption." Local authority representative

"Costs are actually at the bottom of the list of priorities, below all the other factors. Costs are only going to go up!" Infrastructure / engineering representative

"Costs are going to increase and there is going to be huffing and puffing about it. There is going to be an increase in costs but if we want these other factors to be taken into account there is a price tag to it." - Land owner representative

"Costs will increase. The question is: do you want them to increase a little now or hugely, thirty years down the line when climate change kicks in big time? The economic costs of climate change to this country will be huge but we can pay for them now or have our children pay for them later." Land owner representative

"Customers expect electricity to be there but they don't consider the cost." Infrastructure / engineering representative

"I'd rather pay more to have security of supply than pay the least cost." Business representative

"SSEN should explain about their costs better. Most consumers think that the energy retailers are making energy companies a generous return for shareholders." Land owner representative

Impact on local communities

"The impact on local communities is on a similar level to environmental impact. Ideally, we would love to prioritise these, but with political regulations and economic uncertainties they cannot be achieved." Business Representative

"You can never neglect that factor. Whenever we're assessing a new project, the community interests always have to be reviewed." Energy / utility company

"From a business point of view, demonstrating a societal impact gives you more strength in argument." Business representative

Economic impact

"If we think to 2020, Brexit and the Scottish situation, it's going to hit your work. Your profits are going to fall." – Energy / utility company

"The economic impact is of the highest concern of stakeholders and consumers in my opinion." Energy / utility company

"One of the key things for networks is reliability – so trying to procure from the cheapest supplier won't work." Energy / utility company

Environmental impact

"Environmental impact can be linked with the effects on local communities and economic impact. All of these drivers contribute to the sustainability and future of the network." Infrastructure / engineering representative

"From a pragmatic point of view, environmental impact and impact on local communities is below security of supply." Business representative

"From our point of view, as a construction company, I can see the importance of environmental impact is going to grow and grow. It's going to have a lot of importance." Infrastructure / engineering representative

"People are saying that if you are taking renewable electricity from Highlands, why should the environment be disturbed for benefit of people in Central London? That absolutely needs to be worked on." Infrastructure / engineering representative

"Most people now are fairly engaged on climate change and the need to decarbonise 50% of people in Scotland think we need to act now. People say they want something to be done but they don't want the impact on their bills." Voluntary sector representative

Consequences for staff

"Staff are important. They are SSEN's biggest asset" Developer / connections representative

"The consequences of these factors on staff is less of a concern than the anything else to us as stakeholders." Infrastructure / engineering representative

"Staff need to be well remunerated because a motivated workforce impacts on customer experience." Developer / connections representative

"I think morally it's [paying the living wage] the right thing to do." Infrastructure / engineering representative

"I think having a living wage and making it an industry that young people want to come into is really important." - Infrastructure / engineering representative

Security of supply

"From a political point of view, if you don't get security of supply, there will be a greater governmental intervention on energy consumption." Local authority representative (elected)

"Security's critically important." Infrastructure / engineering representative

"In Scotland, people have lower expectations in terms of reliability." Infrastructure/engineering representative

"Civilisation will fail if there is no security of supply. People will die." Land owner representative

"If the reliance on electricity increases, and it inevitably will do, security becomes even more important." Infrastructure / engineering representative

"Security has a huge knock on impact to all the rest of the factors. It sits above all the rest of them." Government body representative

Other factors

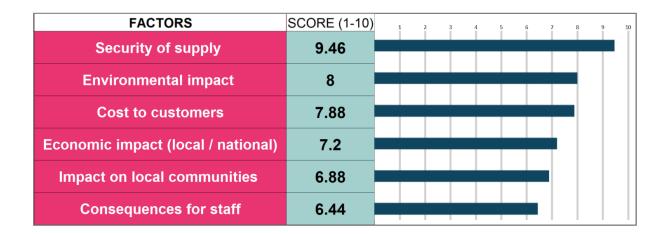
"It will depend how things look post-Brexit. The whole of the EU could send cheap energy to each other, but not to us." Energy / utility company

"Not in my back yard!" Infrastructure / engineering representative

"There will be huge benefit to distributors and generators in getting the public engaged to make it a more efficient system. Things like videos on Facebook." Voluntary sector representative

Individual scoring on the significance of each factor

At the end of the discussion, stakeholders were asked to score each factor individually, out of ten. The results of this were then taken and aggregated. As can be seen in the table below, Security of Supply was seen as the most important, with Environmental Impact second and Cost to Customers in second and third, respectively. The order of factors reflects the order the outcomes of the interactive discussion, shown on page 14.



Q&A:

Before breaking for lunch, there was a short Q&A session, hosted by Dave Gardner. The questions asked, along with his response to each one can be seen below.

Q: How close are we to electric vehicles being the norm, and how is that to be delivered?

A: You hear about initiatives and, of course, all the delays. I heard at one of the tables an Orkney councillor talking about the islands being all electric. I think Aileen spoke about Dundee and Aberdeen. As a transmission business, if you look at the representatives here, I think it'll come quicker than we all probably think. You've seen good policy coming out of Government, so I'd hope, intuitively, over the next 12 years.

Q: If you had one wish for transmission in the future, what would it be?

A: I'd like to see the islands connected. In Orkney, I'd like to see an SSEN connection. I'd like to think that when I'm 60 years old, which is in 5 years, we'll have island connection.

Q: What are the biggest challenges you've faced?

A: The biggest challenge was Beauly Denny. We had huge challenges with island connection. We made lots of commitments to stakeholders, and I think we let a lot of people down. We got the business back on the right track, and we've delivered against our promises. We did this through a combination of good planning and stakeholder engagement.

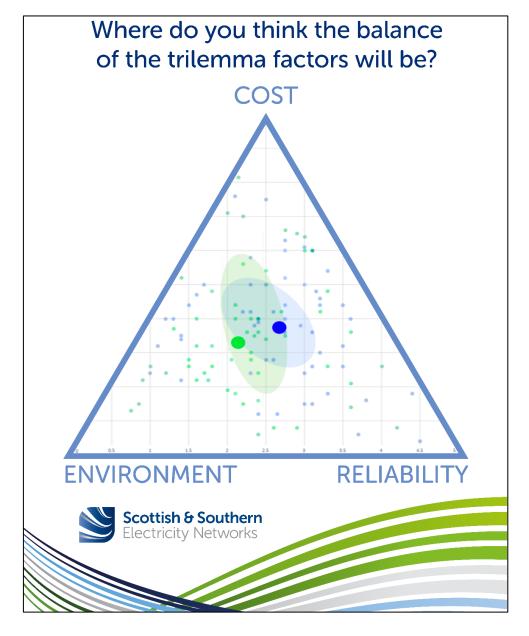
Q: Perth is looking at a smart energy network. Does SSEN work in this area, and do you have an opportunity for a smart energy?

A: From a DSO proposition for Perth, there is one transmission line in. It's a single line with a few other backfeeds. As far as Perth is concerned, looking at the future, into T2 and 3, I think we should be planning for that, so I would very much support that dialogue, and transmission should be there to support and facilitate that.

THE ENERGY TRILEMMA

At the beginning of the workshop, stakeholders were asked to consider the energy trilemma - Cost, Environment and Reliability – stating where they see SSEN at present in terms of where the company's approach fits within these, often conflicting, factors. They were asked to place a sticker on a board reflecting this. At the end of the workshops, after having heard about SSEN's approach, they were asked to revisit this exercise, placing their sticker according to where they believed the company would be in 2030.

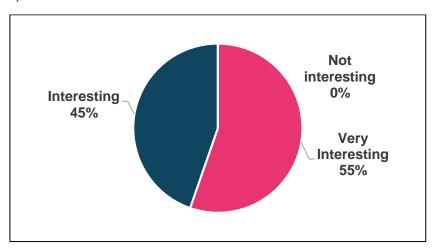
This data was then plotted on a grid in order to calculate a mean position for both the present and for 2030. The outcomes of this exercise are shown below.



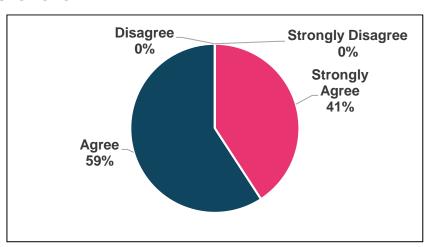
When asked for SSEN's position in terms of the Energy Trilemma now, the aggregated position was more or less central, albeit with Reliability as, marginally, the most important factor. When asked to repeat the exercise, stating where the company would be in 2030, there was a move away from Cost and Reliability, towards the Environment.

SUMMARY OF STAKEHOLDER FEEDBACK

Q1: OVERALL, DID YOU FIND THE WORKSHOP TO BE?



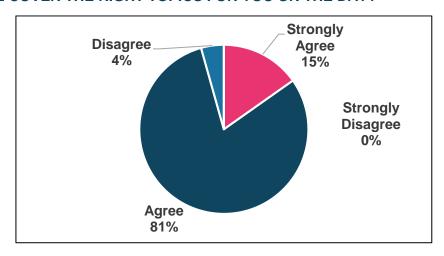
Q2: DID YOU FEEL THAT YOU HAD THE OPPORTUNITY TO MAKE YOUR POINTS AND ASK QUESTIONS?



COMMENTS

- "Plenty of time for questions."
- "All issues raised have been listened to and impressed by commitment to further discussions."
- "Hope the feedback is taken on board and customer relations/communications improve."
- "Good effort to involve everyone. Could have been a better mix of people, our table had a lot of contractors."

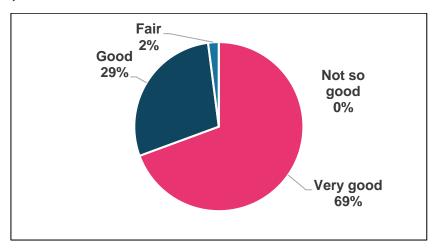
Q3: DID WE COVER THE RIGHT TOPICS FOR YOU ON THE DAY?



COMMENTS

- "Might have been good to have had questions on the environment but within time available was good."
- "V. high level. Would have been useful to provide more technical information on future network plans."
- "However, would like to have seen a little more detail on future works and projects."
- "Wide range of topics."

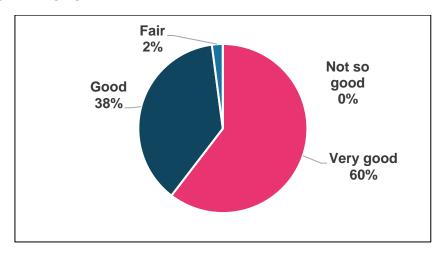
Q4: WHAT DID YOU THINK OF THE WAY THE DAY WAS STRUCTURED AND RUN (E.G. A FACILITATOR, A SCRIBE AND SHE TRANSMISSION REPRESENTATIVE AT EACH TABLE)?



COMMENTS

- "Good to have a separate facilitator, scribe and representative each could focus on their respective role which allowed faster progress."
- "Good mix of stakeholders at the table, public and private stakeholders."
- "A new and innovative way of keeping the conversations flowing!"

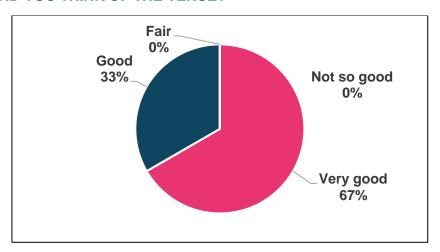
Q5: WHAT DID YOU THINK OF THE WAY THE WORKSHOP WAS CHAIRED BY YOUR TABLE FACILITATORS?



COMMENTS

- "Did best to involve all members around table didn't have person dominating."
- "Good table management and time management."
- "Very inclusive and open approach."
- "SSE input very good. Facilitator important for timekeeping."

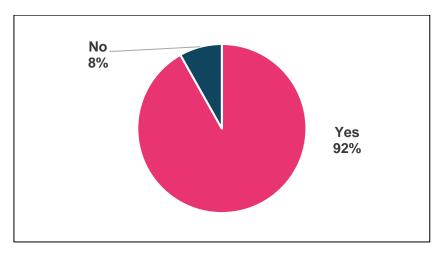
Q5. WHAT DID YOU THINK OF THE VENUE?



COMMENTS

- "Location, temperature and provisions were very good!"
- "Close to transport services and parking options."
- "Sound and heating were good."
- "Excellent venue."

Q6. WOULD YOU BE INTERESTED IN ATTENDING FUTURE WORKSHOPS ON THIS SUBJECT?



Q7. DO YOU HAVE ANY OTHER COMMENTS?

COMMENTS:

- "Good mix at tables from different companies and good networking facilitation."
- "Appreciating that the time constraints probably couldn't allow. However, more focused events could be very useful, i.e. Supply chain specialists."



T: 020 3948 5135