Proposed guidance consultation

Question	Your response
Question 1: Do you consider the measures in the proposed guidance relating to the resilience of the physical infrastructure domains to be appropriate and proportionate?	Confidential? – N The ACS welcomes the measures contained in the proposed guidance which are designed to ensure that networks are designed to avoid or reduce single points of failure. Given the increasing extent to which Scottish consumers rely upon telecommunications services for access to key public and business services, such as interacting with the social security system and carrying out everyday banking transactions, these measures become increasingly more important. Similarly, we are less concerned with the technical ability to implement the guidance but rather the societal benefit or consumer impact and our response to the questions is framed in a way that reflects this.

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	Regarding Scottish specific factors, which are the focus of the ACS, our response focussed primarily on external factors which would trigger resilience events, namely specific Scottish demographic, geographic and climatic factors. While security events are relevant, we don't consider these to be materially different to those impacting on the rest of the UK whereas the external factors can mean that issues affecting Scottish communities, and particularly regarding severe weather events and the impact on remote rural and island communities, can be more extreme or extended in duration. The Scottish Government has classified communities by rurality and remoteness, and this methodology could be adopted to provide a framework for considering communities that may experience significant challenges with resilience and restoration of supply. Given the extent to which consumers now rely on connectivity for basic tasks and activities, it would be beneficial for resilience responses to be monitored on an ongoing basis, and priority consideration should be given to these communities, and the significantly increased societal impacts of outages, rather than considering them to be edge cases.
	The focus on the roll out of 5G capability must not distract providers from providing a full suite of responses to cover all networks, recognising that there are many areas in Scotland do not yet have 4G (or even 3G coverage): there must be suitably robust resilience plans for all types of network coverage. Aside from the clear connectivity impact in areas with not spots (currently 16% of Scotland's geography based on Connected Nations Scotland 2023 report), there is also a consumer choice question as well in that certain consumers may be forced to switch operator to maintain connectivity, citing resilience.

| | The Connected Nations report found that 48% of Scotland has geographic coverage from all four MNOs – and so would theoretically be unaffected.

That means, based on 16% not spots, that there is 36% of Scotland's geography where consumers have a choice of between one and three MNOs and could be quite significantly impacted from a consumer/competition perspective as 3G switched off, but also who might be impacted on choice by resilience considerations.

We would point to the current migration of landline customers from PSTN to VoIP technology and the degree to which some consumers, often older or more vulnerable, will become more reliant on mobile networks in the event of a power outage that affects fixed networks, such as in the event of severe storms.

Many Scottish communities lack competition in the provision of power or communications services and are therefore overly reliant on a single provider. This can have more severe consequences when outages are experienced as this can see whole communities effectively knocked off the grid until resilience plans can be activated. In an increasingly digital world, the interplay between energy services and telecommunications should be considered. Scrutiny of resilience responses, and in the context of this question, the 'last mile' segment of the Network Infrastructure Domains in remote and rural communities could potentially be used to enable measurement of compliance with the duties and guidance overall, as these are the elements that reach consumers. The ACS would like OFCOM to consider whether there is the potential to monitor service provider response to outages and performance degradation in rural areas, to ensure these communities aren't disproportionately affected, with the aim of coming up with better plans, further resilience and redundancy |
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measures, and faster operational response time to such outages. The committee considers that the thresholds for reporting, particularly in remote and rural communities, may need to evolve or even be tailored to specific communities, to reflect that significant areas could face significant disruption (for example, in accessing emergency services) but would not hit the 1,000 threshold currently required. Duration is also a critical factor as well as volume of affected connections: some communities have sustained outages of several weeks with outages and haven't met the threshold for reporting.

We would therefore urge caution in respect of section 4.23 and 4.30 as this will encourage providers to focus on high volume areas exclusively, and to the detriment of remote and rural communities. This would see Scotland disproportionately impacted, with slower responses and lower priority that the rest of the UK. More granular guidance may be beneficial here to ensure a more inclusive approach to resilience is implemented. We would refer to Citizen's Advice Scotland's [response](#) to proposed changes to NIS guidance for further detail.

Within these rural communities we would also recommend that 'time to repair' be considered within this discussion. When back ups are put in place, they can mask the actual time taken to repair and based on anecdotal evidence in Scotland, outages on mobile masts in rural areas can take days or weeks to resolve or indeed for issues to be even acknowledged. MNOs are challenged in these regards in rural areas in particular – so development and regular monitoring of key metrics for rural areas could make a difference in how quickly (or not) service quality issues are resolved.

We also wonder if it would be possible for the service operators to have a system of identification of those communities and indeed those individuals who are put are at specific risk

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	by any outage. By identifying those areas that have a low number of customers but a high dependency on connectivity (low fibre penetration and one MNO) could the service provider operate a more regular maintenance and monitoring operation in these areas? It would also be useful for the service providers to know how many of their vulnerable customers are at risk in any outage so that they could take any further action that might be required.
Question 2: Do you consider the measures in the proposed guidance relating to the resilience at the Control Plane to be appropriate and proportionate?	The ACS has not covered this technical area in discussions however some of the principles articulated above should be considered: most significantly that systemic responses programmed to prioritise high volume connection locations at the Control Plane do not lead to negative consumer outcomes for remote and rural communities experiencing frequent outages.
Question 3: Do you consider the measures in the proposed guidance relating to the resilience of the Management Plane to be appropriate and proportionate?	The Communications Consumer Panel commissioned research into landline usage and the switchover to VOIP, in 2023 this includes a sample of 808 Scottish consumers which was also segmented by rurality. The Scottish sample saw an increased reliance on landlines amongst Scottish Consumers, increasing again in the Scottish sample with 78% of consumers in remote rural areas using landlines to make calls. This more concentrated usage is worthy of note, particularly considering these are likely to be low population areas and potentially less visible owing to the potential for systematic and data driven approaches that prioritise volume of connections at the control plane.

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	Issues with the transition to VOIP are well documented elsewhere, including in work by the CCP, however we would urge operators who are implementing an alternative OOB system, or any other resilience solution implemented at the management plane following the decommissioning of the PSTN, to consider whether this can also provide a resilience solution for vulnerable consumers who are currently relying on PSTN based systems, particularly for care alarms or medical devices.
Question 4: Do you consider the measures in the proposed guidance relating to communications providers' own managed services to be appropriate and proportionate?	Agree with the measures proposed and the proposal to prioritise and protect the quality of voice calls. Do not consider there to be a Scottish specific element that's distinct to those noted in the above responses.
Question 5: Do you consider the measures in the proposed guidance relating to communications providers' arrangements for preparing for adequate process, skills and training to be appropriate and proportionate?	Yes. Again, we would urge for guidance to reference the need to processes, skills and training to explicitly call out the impacts of outage and therefore the response and resilience needs of remote and rural communities.

Call for Input

Question	Your response
CFI question 1: Does this framework accurately capture the factors relevant to assessing what is an appropriate and proportionate measure for MNOs to take with regards to power resilience for RAN cell sites?	Confidential? – N Not something ACS would comment on as no Scottish specific angle to this.
CFI question 2: Do you agree that at a minimum MNO's networks should be able to operationally withstand short term power-related incidents?	Given travel times in the more remote areas of Scotland, the Committee recommends that consideration be given to resilience approaches taking account of the potential for longer power outages in these areas.

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CFI question 3: What mobile services should consumers be able to expect during a power outage, what consumer harms should power backup up focus on mitigating and does this vary depending on the type or duration of the outage?	As we have indicated in our response to the guidance consultation above, Scottish consumers can be disproportionately affected by outages, owing to increased impact of weather events, combined with geographic and demographic factors. There is an overreliance or concentration of usage of particular providers or technologies – owing to a lack of consumer choice/competition in specific areas often down to only one provider being available in a specific area. This concentration can lead to greater severity of impacts when outages are experienced. This feature should be recognised by mobile operators in resilience planning in areas where there are known concentrations of users/market share. The consumer harms to be mitigated will be the same as those elsewhere in the UK, so it's the concentration element that needs to be addressed for Scotland.
CFI question 4: What technical choices are available to MNOs to reduce power consumption, and should be considered as part of assessment of appropriate and proportionate measures?	Not something ACS would comment on as no Scottish specific angle to this.
CFI question 5: How many sites would it be feasible to upgrade and maintain and why?	Not something ACS would comment on as no Scottish specific angle to this.
CFI question 6: Do you consider that providing a minimum of 1 hr backup to all RAN cell sites would to be proportionate to meet the security duties under s.105A to D of the Communications Act 2003?	Not something ACS would comment on as no Scottish specific angle to this.

Question	Your response
CFI question 7: What cost effective solutions do you consider could meet consumers' needs during a power outage?	Across the technology industry, it is recognised that rural connectivity and resilience will require "out of the box" thinking, in order to ensure network uptime. Collaboration between mobile operators and the local community could be much improved for the advantage of both. There are potential opportunities for enhanced collaboration between the mobile operators and local communities regarding maintenance activities or outage assistance. For example, there a many local organisations working within those rural areas who could assist in transporting the required engineers and equipment to the areas affected (e.g. mountain rescue teams, local farmers etc). For example, during severe snowstorms, Transport Scotland will draw on the help of local farmers with snowploughs, in order to clear to smaller local roads. Such opportunities also exist, for example, in repairing alignment of microwave dishes after windy storms – such tasks could be "outsourced" to appropriately identified and trained and members of the local population, who obviously have a vested interested in seeing service outages restored rapidly. Having access to a standing army of assistance, on the ground, would inevitably make it easier and quicker to access and repair local sites. Consideration also needs to be given to the network of last resort, given that a significant proportion of Scotland currently has only choice of one operator for 4G services and therefore no back up in the event of failure (if these are deemed to be important in event of emergencies?).

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CFI question 8: **a) Is it more cost efficient to increase power backup up to any space, weight, or planning limitations, i.e., increasing power backup as much as is feasible provides the lowest £ per hour?**	Not something ACS would comment on as no Scottish specific angle to this.
b) do the benefits of any power backup solution have diminishing returns, i.e., the benefit per hour decreases as you increase the amount of power backup?	Not something ACS would comment on as no Scottish specific angle to this.
CFI question 9: Does the mobile market fail to capture the value or importance of power backup, and if so, why?	Not something ACS would comment on as no Scottish specific angle to this.
CFI question 10: Should improvements in power backup be focused on solutions at sites which are identified as higher risk of outages?	Yes. This would address the issue of the concentration of supply in Scotland along with the increased likelihood of outages owing to climatic factors, and the difficulty in restoring supply owing to geography.
CFI question 11: Why would any requirement lower than a minimum of 1 hour be sufficient in future? What duration do you consider would be sufficient and why?	Not something ACS would comment on as no Scottish specific angle to this.
CFI question 12: Over what time period could industry make upgrades to provide a minimum of 1 hour at every cell site or other cost-effective solutions to address potential consumer harm?	Not something ACS would comment on as no Scottish specific angle to this.

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