

Your response

Question	Your response
<p>Question 1: Have we correctly identified the key changes in the utilities sector that could lead to additional spectrum requirements?</p>	<p>Confidential? –N</p> <p>The consultation document comprehensively identifies the fundamental changes and future needs within the utility sector, particularly in the electricity sector, driven by a net zero emission target of 2050. These changes and the growing complexity of utility systems, combined with the digitalisation of these systems, lead to increasing reliance on communication systems and a corresponding increase in spectrum requirements.</p> <p>The enhanced security, reliability and resilience of critical national infrastructure (such as required by utilities) are also important factors in the requirement for dedicated spectrum.</p> <p>We also recognise that additional spectrum could facilitate innovation and future-proofing of energy systems.</p> <p>Key changes identified in the consultation document, including the digitalisation of the sector and the transition to net zero, will lead to increasing data traffic and may strain the present capacity of the sector’s communication systems.</p> <p>We are also aware of the demand for additional spectrum for the water and drainage sectors for advanced monitoring of infrastructure, for example, CCTV on remote pump stations and storm overflows.</p>

<p>Question 2: What alternative communication solutions might play a role in meeting the future operational communication needs of the utilities sector, alongside or instead of additional spectrum for a private network?</p>	<p>Confidential? –N</p> <p>We agree that a one-size-fits-all approach may not be suitable for meeting the diverse operational communication needs of the utility sector. The exploration of alternative communication solutions such as Public Mobile Networks (ranging from network slicing to Mobile Virtual Network Operator (MVNO) solutions), Fibre Connectivity, Satellite Communication, Hybrid Networks, Mesh Networks and Shared Private Networks reflects the complexity of the sector's transformation and the need to consider a range of technologies</p>
	<p>that align with specific operational scenarios underpinned by use cases, capacity, coverage, security, resilience and reliability. While additional spectrum for private networks is one potential solution, the document's recognition of alternative solutions demonstrates Ofcom's commitment to thoroughly understand the sector's needs before moving forward with any regulatory decisions. A comprehensive cost-benefit analysis of the shortlisted options, including any optimism bias, is required to decide the optimum solution. Indeed, the factors that determine 'optimum' will require cross-industry consideration, given the complex and broad requirements.</p>
<p>Question 3: Are there any other spectrum bands we should consider for use by utilities?</p>	<p>N/A</p>

<p>Question 4: Do you have any comments on the three bandwidths we have considered that might be necessary to support a private network for utilities? Please reference our capacity analysis in annex 7 where relevant.</p>	<p>Confidential? –N</p> <p>Our understanding aligns with the industry suggestion of a minimum bandwidth of 2x3 MHz required for the utility sector. Apart from user data, which Ofcom has included in its analysis, these communication networks also need to support monitoring and controlling the utility networks and managing the communications network itself. Consideration should also be given to extreme weather and disaster situations, which typically result in considerable increases in traffic. Increased bandwidth in private networks will also future-proof the communication system regarding technology advancements, such as teleprotection applications, fault monitoring, security and access control technology.</p>
<p>Question 5: Do you have any comments on our approach to examining each potential candidate spectrum band, including the factors relevant to assessing suitability, and the capacity and coverage analysis provided in annexes 7 and 8?</p>	<p>Confidential? –N</p> <p>The consultation document does not provide detailed information supporting the assumption made for Environmental Noise in Table A8.1 for coverage modelling of the wireless communication system deployed at a substation. Environmental Noise can be a significant issue at substations and other parts of the electricity infrastructure. We suggest conducting a detailed study, including real-time measurements, to ascertain the</p>
	<p>impact of Environmental Noise on deployed frequency bands.</p>
<p>Question 6: Do you have any comments on our overview of the 400 MHz band in NI? Please consider the specific factors we have discussed in your response.</p>	<p>N/A</p>
<p>Question 7: Do you have any comments on our overview of the 450 MHz band in GB and NI? Please consider the specific factors we have discussed (including the coexistence analysis in annex 9) in your response.</p>	<p>N/A</p>

<p>Question 8: Do you consider that changes in the spectrum environment for the 450 MHz band mean that there is a case for re-examining whether this band should be reconfigured in the UK to align with the harmonised band plan?</p>	<p>N/A</p>
<p>Question 9: Do you have any comments on our overview of the 700 MHz band in GB and NI? Please consider the specific factors we have discussed in your response.</p>	<p>Confidential? –N</p> <p>Real Wireless agrees with Ofcom’s assessment of the 700MHz band for current use and future spectrum demand in GB and NI. Enabling the 700 MHz band for private LTE networks for utilities will be commercially attractive from a deployment cost perspective. The mature and diverse presence of 3GPP-compliant LTE 700 MHz equipment manufacturers, device manufacturers, and supply chains should prevent vendor lock-in by developing a diversified, interoperable strategy. We also expect ORAN-compliant equipment vendors to support this band for private network deployments.</p> <p>We suggest a further detailed study of coverage, capacity and cost for using this band by the utility sector.</p>
<p>Question 10: Do you have any comments on our overview of the 800/900 MHz band in NI? Please consider the specific factors we have discussed in your response.</p>	<p>N/A</p>
<p>Question 11: Do you have any comments on our overview of the 1900 MHz band in GB and NI? Please consider the specific factors we have discussed in your response.</p>	<p>N/A</p>
<p>Question 12: Which band(s) do you consider we should examine further with a view to developing consultation proposals to enable their use in a private network, if this were needed? Please reference the factors we have considered where appropriate and provide separate answers for GB and NI if relevant.</p>	<p>N/A</p>