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Broadband Delivery UK (BDUK)

2016 National Broadband Scheme for the UK

Guidance: The role of Next Generation Access technologies under the UK's State aid scheme

1. Introduction

- 1.1. This document provides guidance to implementing bodies and suppliers on the role that we expect next generation access technologies to play in achieving the superfast objectives within BDUK's broadband programme. The requirements that we have set out here are central to promoting the supply of advanced broadband services to residential and business consumers.
- 1.2. It is essential that State aid measures are designed to address identified market failures in the provision of NGA broadband in a coherent and effective manner. The outcome of the proposed intervention should deliver better broadband speeds and enhanced coverage. This means an NGA Network infrastructure is deployed in defined 'white' intervention areas by a supplier and this capability provides the means to deliver superfast broadband services to end-users. All NGA technologies, including wired and wireless technologies, may have a role in delivering those outcomes.
- 1.3. To be able to use State aid under the UK's scheme, Implementing bodies are required to run compliant procurement processes that are technology neutral. They must not 'pick technologies', but rather select suppliers on the basis of the most economically advantageous tender (MEAT). An Implementing body's tender process would award MEAT by assessing the solutions for the value they provide against the evaluation criteria. This includes consideration of the solution quality, coverage and speeds, and the design of the wholesale offering. The evaluation criteria are set out in the Commission's decision¹, as are the weighting ranges that Implementing Bodies can set for each criteria.
- 1.4. However, bidders are constrained in that they are only able to receive State aid in respect of technologies that are classed as NGA technologies. The Commission's decision also requires NGA technologies in receipt of public funds to provide a step

¹ European Commission, SA. 40720 (2016/N) – National Broadband Scheme for the UK for 2016-2020, 26.05.2016, at http://ec.europa.eu/competition/state_aid/cases/263954/263954_1760328_135_4.pdf

change in capability. This document provides more detail on how BDUK's National Competence Centre (NCC) would interpret these requirements for a given technology.

- 1.5. The guidance provided here should be read in conjunction with other detailed guidance dealing with the complementary elements to the requirements, including the access conditions that apply to part-state funded networks. In particular, reference should be made to (i) wholesale network access requirements that will apply to suppliers in direct and indirect receipt of State aid²; and (ii) the pricing rules that constrain the supply of specified active and passive access products³.
- 1.6. The Commission's decision notes that "*Fixed Wireless Access may be eligible for State aid provided that the technology is capable of delivering reliable high speeds per subscriber*".⁴ In particular, FWA would have to meet both the minimum speed and step change requirements.
- 1.7. In regard to FWA, this document assumes that both the serving network nodes (e.g. base stations) and customer premises equipment are deployed in permanent or semi-permanent locations, and this excludes personal mobile devices (and dongles). Qualifying a mobile network technology as NGA is currently outside the scope of this document. If necessary, direct advice should be sought from BDUK on mobile networks.
- 1.8. In assessing projects for State aid approval, the NCC will require that projects submitted meet the requirements below.
- 1.9. The approach that BDUK has set out in this guidance has been developed in light of feedback from the European Commission. These requirements are deemed necessary to meet State aid requirements under EU law. They have been explicitly designed to meet those State aid requirements and are legally separate to the requirements specified under the UK/EU regulatory framework for communications.
- 1.10. Implementing Bodies should also follow the principles set out in this guidance in assessing responses to Open Market Reviews or Public Consultations when deciding whether to classify claimed coverage as NGA provision within its coverage maps.

2. **The subsidised solution must deliver a 'step change' in network capability and service availability and consistently provide a high quality experience to end-users**

- 2.1. This requirement ensures that where a basic broadband infrastructure already exists, State aid must only be used to deploy infrastructure that genuinely offers a significant new capability to end-users.
- 2.2. In assessing projects for State aid approval, the NCC requires that NGA technologies that are used in NGA white intervention areas must provide the same outputs as those defined for other established NGA network deployments. Specifically, the NCC will expect to see that the technical solution:
 - is capable of providing access speeds in excess of 30 Mbps download, not only by reference to theory and technical standards, but also by evidence of

²BDUK, *Guidance on wholesale access conditions applicable to part-state funded networks*

³BDUK, *Guidance on benchmarking and other access pricing*

⁴ *European Commission, SA. 40720 (2016/N), paragraph 120*

calibrated performance measurements of an existing deployment within the area of interest or a demonstrably equivalent deployment in a similar geographical environment;

- provides at least a doubling of download speeds and substantially higher upload speeds in the target area;
- must be designed in anticipation of providing at least 15Mbps download speed to end-users for 90% of the time during peak times in the target area, as demonstrated by industry-standardised or reliable independent measurements;
- must show how the solution would adapt to maintain capability and end-user experience in changes to key parameters such as increased take-up and increased demand for capacity, and be able to show using clear calculations that this is both technically and commercially viable;
- must have characteristics (e.g. latency, jitter) that enable advanced services to be delivered e.g. video-conferencing and High Definition video streaming to be provided to end-users as evidenced by trial results (not necessarily obtained within the target area); and
- have longevity such that one might reasonably expect increases in performance within the next 7 years.

2.3. In assessing whether the requirement is being met, the NCC will require the applicant to provide evidence of the capabilities detailed above. That evidence might include:

- the Business case, including scenario analysis;
- planning consents having being obtained, or likely to be obtained, for the proposed developments;
- actual deployment of similar scale and end-user density;
- field trial or commercial deployment, supplemented by modelling of different take-up scenarios;
- for wired NGA technologies: access network planning taking due account of wired line length and quality from existing or planned access nodes, to show that the access speeds are realistic in the geographic context;
- for fixed wireless NGA technologies: radio plans and interference analysis, using planning tools correctly calibrated for the target geography, to show that the access speeds are realistic and the spectrum to be used is appropriate for its geographic context;
- proposed product offerings and associated service level guarantees;
- network dimensioning calculations; and
- Evidence that the enabling technology has a future development path, such as existing internationally accredited standards, on-going development of new versions of the standards, international research working groups, and diversity of the supply chain.

2.4. Bidders will be required to complete a template to show it's network meets the above requirements. BDUK has provided an example of how a fixed wireless solution could demonstrate its compliance with the NGA requirements. BDUK would note however, that the worked example is meant to be illustrative and the templates will need to be filled in with information specific to the bidder's network. Both the template and the worked example can be found on the BDUK webpage as this document.

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