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## **Broadband Delivery UK (BDUK)**

### **National Broadband Scheme for the UK**

#### **Guidance: The role of Next Generation Access technologies in addressing superfast broadband market failure under the UK's State aid scheme**

## **1 Introduction**

- 1.1 Local broadband and community projects that are part of BDUK's superfast broadband programme will be subsidised to varying degrees by funding from DCMS, as well as other UK and potentially EU public sources. In almost all cases the funding for these local broadband projects will give rise to State aid.
- 1.2 This document provides guidance to local and community bodies as well as other interested stakeholders on the role that we expect fibre, wired and fixed wireless technologies to play in achieving the superfast objectives within BDUK's broadband programme. The requirements that we have set out here are central in promoting the supply of advanced broadband services to residential and business consumers.
- 1.3 It is essential that State aid measures that are designed to address identified market failures in the provision of NGA, do so in a coherent and effective manner. The outcome of the proposed broadband intervention should deliver better broadband speeds and enhanced coverage. In most instances, 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 fibre, wired and fixed wireless technologies each may have a role in delivering those outcomes.
- 1.4 To be able to use State aid under the UK's scheme, local bodies are required to run open 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). A local body's tender process would award MEAT by defining criteria that express the project's objectives and assessing solutions for the value they provide against these criteria. A local body's criteria may include:

- the speed and coverage offered by a solution;
- the quality of a solution;
- the scalability and upgradability potential of the solution;
- the level of open access<sup>1</sup> and the retail offering;
- the deliverability of the solution;
- the commercial sustainability of the solution; and
- the cost<sup>2</sup> and financial risk associated with the deployment of the solution.

- 1.5 However, bidders are constrained in that they are only able to receive State aid in respect of technologies that are classed as NGA technologies where targeting white NGA areas. The text of the Commission's decision<sup>3</sup> requires NGA technologies in receipt of public funds to provide a step-change in capability. This document provides more detail on how BDUK's National Competency Centre (NCC) would interpret these requirements for a given technology.
- 1.6 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) the general and specific wholesale network access requirements that will apply to suppliers in direct and indirect receipt of State aid<sup>4</sup>; (ii) the general condition applying to the supplier in instances where, a third party makes a new request for wholesale network access<sup>5</sup>; and (iii) the pricing rules that constrain the supply of specified active and passive access products<sup>6</sup>.
- 1.7 The Commission's decision notes that certain advanced Fixed Wireless Access (FWA) technologies can qualify as an NGA Network.<sup>7</sup> This document also sets out requirements in respect of subsidising FWA as an NGA network, and aims to clarify the specific conditions on FWA in paragraphs (42) and (74) of the Commission's decision.
- 1.8 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). If necessary, direct advice should be sought from BDUK on mobile networks.
- 1.9 In assessing projects for State aid approval, the NCC will require that projects submitted to it for use in NGA white areas meet the requirements below. For example, the requirements are consistent with the approach taken by BDUK to assure suppliers' solution components offered as part of their bids for BDUK's Broadband Delivery Framework, and approved by the NCC for projects calling off the framework.

<sup>1</sup> This is required for State aid compliance under paragraph (49) of the Commission's decision regarding the UK's scheme

<sup>2</sup> This is required for State aid compliance under paragraph (49) of the Commission's decision regarding the UK's scheme

<sup>3</sup> *European Commission, State aid SA.33671 (2012/N), National Broadband scheme for Broadband Delivery UK, 20.11.2012, at [http://ec.europa.eu/competition/state\\_aid/cases/243212/243212\\_1387832\\_172\\_1.pdf](http://ec.europa.eu/competition/state_aid/cases/243212/243212_1387832_172_1.pdf)*

<sup>4</sup> *BDUK, Guidance on wholesale access conditions applicable to part-state funded networks, at:*

[http://www.culture.gov.uk/images/publications/BDUK\\_Draft\\_wholesale\\_access\\_conditions\\_050912.pdf](http://www.culture.gov.uk/images/publications/BDUK_Draft_wholesale_access_conditions_050912.pdf)

<sup>5</sup> *BDUK, Basic test for new wholesale access requests on part-state funded networks, at: [http://www.culture.gov.uk/images/publications/State\\_Aid\\_Guidance\\_for\\_new\\_wholesale\\_access\\_requests.pdf](http://www.culture.gov.uk/images/publications/State_Aid_Guidance_for_new_wholesale_access_requests.pdf)*

<sup>6</sup> *BDUK, Guidance on benchmarking and other access pricing, at:*

[http://www.culture.gov.uk/images/publications/State\\_aid\\_Guidance\\_Benchmarking.pdf](http://www.culture.gov.uk/images/publications/State_aid_Guidance_Benchmarking.pdf)

<sup>7</sup> See paragraph 57 of the EU Guidelines for the application of state aid rules in relation to the rapid deployment of broadband networks, see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:025:0001:0026:EN:PDF>

- 1.10 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.
- 1.11 Local Bodies should also utilise the principles set out in this guidance when assessing a response to either an Open Market Review and/or a Public Consultation when making decisions on whether to classify claimed coverage as NGA provision within its coverage maps.

## **2 Requirement 1: 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 30Mbps download, not only by reference to theory and technical standards, but also by evidence of calibrated performance measurements of an existing deployment within the area of interest or an demonstrably equivalent deployment in a similar geographical environment;
  - typically provides at least a doubling of average access speeds in the target NGA intervention 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 intervention 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 trials results not necessary obtained within the area of interest; 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 / or
- 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.

**3 Requirement 2: Where FWA networks are deployed, there shall be a commitment to upgrade to fibre components at a later stage if it becomes economically viable.**

- 3.1 This requirement ensures that public money is used to support infrastructures that offer a long term, sustainable solution for end users. Where Fibre to the Premises (“FTTP”) is not economically viable today, any alternative subsidised NGA solution should support this goal where and when possible (i.e. when revenues increase or deployment costs decrease sufficiently).
- 3.2 In assessing projects for State aid approval, the NCC will expect the supplier to be able to demonstrate that the network deployed will be capable of delivering a long term solution for the community of users in that area and providing for forecasted increases in customer take-up and usage. In particular, the supplier must demonstrate its willingness to transition to fibre solutions where and when network economics and performance levels justify that change. Examples of how this requirement could be met include:
- providing details of the necessary economic conditions and / or commercial triggers that would enable the supplier to upgrade the network or parts of the network, for example, by extending fibre from backhaul elements to some or all of the local distribution nodes; and/or
  - demonstrating a developed product offering (including product description and indicative pricing) for customers to receive FTTP upon request, where any direct implementation and operating costs can be recovered from customers, either upon installation, or through a reasonable financing arrangement which disadvantages neither the customer nor the supplier.