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Broadband Delivery UK (BDUK)

2016 National Broadband Scheme for the UK

Guidance: Wholesale Open Access Network Requirements

1. Introduction

- 1.1. In this document, BDUK provides guidance to suppliers, implementing bodies and other stakeholders on the general and specific wholesale network access requirements that will apply to suppliers in direct and indirect receipt of State aid. This document should be read in conjunction with our other detailed guidance: in particular, reference should be made to the pricing rules for the access products¹. Separate guidance will be issued for Reduced Access bids.
- 1.2. These wholesale open access requirements have been explicitly designed to meet State aid requirements under EU law and are legally separate to the requirements specified under the UK/EU regulatory framework for communications.
- 1.3. As the 2016 National Broadband Scheme (NBS) is an umbrella State aid scheme, projects submitted to BDUK's National Competence Centre for State aid approval will need to demonstrate that they have incorporated the full set of general and specific wholesale network access conditions in supplier contracts.

2. General open access conditions

- 2.1. A key principle of the Broadband Guidelines² and the 2016 NBS Decision is that networks built with public funds should offer effective wholesale access that supports competition and prevents a supplier from exploiting its monopoly position through anti-competitive practices. To meet this requirement all suppliers must offer access to the subsidised network under

¹ *Guidance on benchmarking and other access pricing*

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:025:0001:0026:EN:PDF>

fair and non-discriminatory conditions to all operators who request it, and provide the possibility of effective and full unbundling (called “Open Access”).

- 2.2. These open access conditions will apply to new infrastructure and existing infrastructure in the NGA white intervention area that is used in the deployment of the solution. The access conditions must apply for at least 7 years or indefinitely in the case of new passive infrastructure assets.
- 2.3. Where the network operator offers both wholesale and retail services (i.e. is vertically integrated), adequate safeguards must be put in place to prevent any conflict of interest, undue discrimination towards access seekers or content providers and any other hidden indirect advantages. To that end, where the network operator also provides a retail service, the network operator must (i) make available a reference offer for the wholesale services to competitors at least 6 months before starting the provision of retail services and (ii) undertake accounting separation in order to ensure a level playing field for competition.
- 2.4. The supplier is required to publish a reference offer for the wholesale access it offers on State subsidised infrastructure, where that access differs to that offered under ex ante regulation. The supplier is further required to notify Ofcom/BDUK of the charges and terms and conditions applying to any specific wholesale access that it provides on the State subsidised network, where that access differs to the access offered under ex ante regulation. Furthermore, the supplier must notify anyone using that specific product of changes in the charges or terms and conditions.
- 2.5. It should also be noted that access seekers - who are indirect beneficiaries of State aid – will be required to offer bit-stream access themselves. This obligation to provide bit-stream access would also be subject to the reasonable demand test (see section 4 below), specifically, that no comparable access product is already offered in the same geographic area by another operator at equivalent prices to those of more densely populated areas.
- 2.6. ***Use of existing regulated products:*** The 2016 NBS Decision allows bidders to include regulated products in their open access bids (such as BT’s Physical Infrastructure Access), even though these regulated products may restrict the use of the infrastructure to certain markets, on the grounds that it would support the participation of smaller operators in bids. This option is only open to suppliers who do not own or control the regulated infrastructure.
- 2.7. It is accepted that the supplier’s wholesale products would be restricted where it used PIA, or where the new infrastructure depended on PIA (e.g. fibre through the duct). However, infrastructure that did not depend on PIA would be expected to be offered on an unrestricted basis, as per the paragraphs above.

3. Specific network access conditions

- 3.1. The 2016 NBS Decision includes a list of specific products that, if used in the deployment of the NGA solution, must be made available from the point of network deployment. A table from the 2016 NBS Decision outlining the access requirements for each product is attached as Annex A.
- 3.2. **New Infrastructure:** A key principle of open access is that a level of over-provisioning is required to ensure that effective competition over the subsidised infrastructure can take place. For ducts and fibre, the 2016 NBS requires that the infrastructure must be configured to support at least 3 access seekers. However, recognising the high costs of over-provisioning, for cabinets and mast infrastructure, the 2016 NBS only requires that access shall be provided to the access seeker upon request, and does not need to be built upfront. For cabinets and masts, the direct cost of construction of additional capacity must not be charged directly to the access seeker, however the price may reflect the long run incremental costs associated with providing the infrastructure as a service. In order to receive State aid approval, the supplier must demonstrate an approach for meeting such requests for additional capacity, subject to technical and legal feasibility. Should it receive an request, the supplier must provide the access in a reasonable timescale.
- 3.3. **Existing Infrastructure:** Where existing infrastructure is being used to support the NGA construction, those assets should support requests for access, where technically feasible (e.g. given reasonable loading factors and existing capacity) and legally feasible (e.g. given wayleave agreements).
- 3.4. **Regulatory remedies:** Additionally, BDUK will require suppliers to provide such additional forms of wholesale access as Ofcom mandates as a regulatory remedy. That access would be required on new infrastructure and existing infrastructure in the NGA white intervention area that is used in the deployment of the solution.
- 3.5. **Vectoring:** The 2016 NBS Decision recognises that vectoring technology could be eligible for state subsidy where it is integral to a new infrastructure deployment such as fibre to the cabinet. As vectoring does not allow for physical unbundling, a Virtual Unbundled Local Access product must be provided which is functionally equivalent to physical access.

4. Requests for new forms of access

- 4.1. The supplier is also required to meet all requests for new forms of wholesale network access³ made by an operator demonstrating reasonable demand for a product that is not already available, during the seven year period of the

³ This is required for State aid compliance under paragraph 127 of *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

State aid contract (or indefinitely in the case of new physical infrastructure). New forms of wholesale network access include requests for modifications to existing network access and requests for completely new forms of network access. This requirement applies to existing and new infrastructure used in the intervention area.

- 4.2. In assessing requests for new forms of network access, access seekers would need to demonstrate to BDUK that their demand meets the three requirements of the “reasonable demand” test:
- (i) the access seeker must provide a coherent business plan (based on a product price that is consistent with the pricing principles set out in section 3 of the 2016 NBS Decision) which justifies the development of the product on the subsidised network;
 - (ii) no comparable access product is already offered in the same geographic area by another operator at equivalent prices to those of more densely populated areas; and
 - (iii) the introduction of the new wholesale access products should deliver sustainable and effective competition in the downstream market(s).
- 4.3. **Business Plan:** As per footnote 80 of the Broadband Guidelines, a credible business plan would be supported with documents like bank loan agreements and a detailed calendar deployment plan.

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Annex A - Extract from the 2016 NBS - Technical Access Requirements

(125) Specific forms of network access: The following access products must be made available at the point of network deployment, and insofar as relevant to the specific technologies involved: ducts, poles, fibre, cabinets, copper loop unbundling, masts, antennas, active access.

(126) Those products must fulfil the following specifications (and capacity requirements):

- Ducts: where new duct infrastructure needs to be built, it must be configured to support at least three competing infrastructure providers and designed to support alternative technologies. Access must be provided to junction nodes including splitter nodes, aggregation nodes, and footway boxes. The supplier will not be obliged to provide for new ducts where the same is not necessary for their network build. For example, in FTTP/C networks, the laying of direct buried fibre in soft verges or uncultivated land will be acceptable provided that the wholesale access requirement is met by the dark fibre for three competing infrastructure providers. The UK authorities have noted that they expect that the Highway Authority will require sub-ducting under a public highway.
- Poles: new pole infrastructure must be configured to support at least three competing infrastructure providers with duct or dark fibre. Where active equipment is installed on poles the point referring to masts below applies.
- Fibre: access shall be made available at appropriate Points of Flexibility in the network: at the telephone exchange or Point of Presence's Optical Distribution Frame or equivalent at cabinets or similar local distribution points. Access shall be provided for at least three competing infrastructure providers via: dark fibre⁴, space for active and optical equipment (of a type similar to the supplier's equipment), existing power supplies. Fibre access products must be available from appropriate Points of Flexibility in the network, namely: at the Point of Presence or telephone exchange's Optical Distribution Frame or equivalent (VULA equivalent), at cabinets or similar local distribution points, at aggregation nodes, splitter nodes or other similar Points of Flexibility
- Cabinets: Access to cabinet space and existing power supplies shall be provided for at least three competing infrastructure providers upon request. This does not mean that extra-large bespoke cabinets need to be deployed from the outset. However

⁴ Dark fibre access is required to all network elements, excepting only the final drops from the Points of Flexibility nearest to end user premises on the condition that individual access to those premises is provided via Optical Distribution Frame, VULA or equivalent. Furthermore, in any cases where final drops or the distances to the last Points of Flexibility are unreasonably long, considering geography and premise density, then dark fibre access for three competing infrastructure providers would also be required for those final drops together with reasonable access to additional Points of Flexibility nearer to the premises. Points of Flexibility include exchanges, Points of Presence, cabinets, local distribution points, aggregation nodes, splitter nodes, and similar.

designs must allow new cabinets or upgrades to be deployed if and when access is reasonably requested.

- Copper loop unbundling: Copper loop access product must be available from an appropriate Point of Flexibility in the network: at the Point of Presence or telephone exchange's Main Distribution Frame or equivalent e.g. for Local Loop Unbundling (LLU); at cabinets or similar local distribution points e.g. for Sub-loop Unbundling (SLU).
- Masts: Access to mast space, antenna apertures or for other active equipment and existing power supplies shall be provided for at least three competing infrastructure providers upon request subject to this being legally and technically possible. Operators are expected to demonstrate that their network design anticipates having to respond to these requests. This does not mean that extra-large masts need to be deployed from the outset. However, designs must allow mast extensions or upgrades to be made possible if requested.
- Antennas: Access to shared antenna systems (where multiple operators feed radio signals to the same antennas) will be provided or supported where technically feasible, and in particular where planning rules could impede other forms of mast capacity expansion. Access to shared active network elements (where multiple operators feed digital data signals to the same equipment) will be supported where technically feasible (e.g. Multiple Operator Core Network or Multiple Operator Radio Access Network mobile network technologies), and in particular where planning rules could impede other forms of mast capacity expansion.
- Active access: Bit-stream access for broadband access networks and associated backhaul networks shall be provided by infrastructure providers at appropriate Points of Interconnection such as telephone exchanges or Points of Presence e.g. for VULA. New subsidised network infrastructure shall either be dimensioned to meet the likely capacity requirements of competing providers, or be capable of being expanded to meet it upon demand. Existing infrastructure shall support the capacity requirements of competing providers where technically feasible. Bit-stream access shall be provided over standardised or fully defined technical interfaces. Accommodation for access seekers' necessary interconnection equipment shall be provided including access to suitable power supplies.
- All existing infrastructure: Infrastructure access requirements as set out above apply equally to all existing infrastructure that is used in the deployment of the subsidised network. Existing assets should support access where technically feasible (e.g. given reasonable loading factors and existing capacity) and legally feasible (e.g. given wayleave agreements, or as a result of conditions placed on regulatory access to existing infrastructure).