



**Sub Annex B_1 – Basic End-User Connection Service
FIRST DRAFT**

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1 Purpose and Scope

- 1.1 This Sub Annex sets out the terms and conditions under which Oman Broadband will provide the Basic End-User Connection (BEUC) Service to Requesting Licensee over a passive fibre-optic cable from Oman Broadband's Data Centres to the Fibre Termination Point (FTP) at End-User's Premises for the purpose of Requesting Licensee providing PON services.

2 Definitions

2.1 See Definitions in Annex A of the Agreement.

3 Service Description

- 3.1** An End-User's Premises may be at a Single Dwelling Unit (SDU) or within a Multi-Dwelling Unit (MDU).
- 3.2** There are four types of Basic End-User Connections (BEUCs) categorised by End-User type:
- (i) BEUC Residential;
 - (ii) BEUC Business;
 - (iii) BEUC Health and Education;
 - (iv) BEUC Riyadh.
- 3.3** An optional service to supply and connect the Optical Network Terminal (ONT) is offered in combination with the existing BEUC Service, and is referred to as 'Connect with ONT' Service. After receipt of the order submitted by Requesting Licensee, Oman Broadband will engage its resources and deliver the Service under the terms of this Agreement, at the location of the End-User's Premises.
- 3.4** Optical splitter architecture currently uses a 1:32 Split Ratio. From the Fibre Distribution Hub (FDH), the fibre will be distributed to a Network Access Point (NAP). Drop cables will be delivered from the NAP to the FTP, located at the End-User's Premises.
- 3.5** Oman Broadband shall provide to Requesting Licensee the use of passive infrastructure such as fibre-optic cable, Optical Distribution Frame (ODF), splitters, NAPs, FTPs at Oman Broadband's Data Centre and, where applicable, ODF patching at an MDU's telecom room.
- 3.6** BEUC Service will be provided to Requesting Licensee between its infrastructure and Oman Broadband's Fibre-Optic Infrastructure.
- 3.7** The Interconnection may take one of two forms:
- (i) Facilities access: where Requesting Licensee requires a physical presence at the point of interconnect in order to co-locate active Equipment related to the provision of backhaul at the Data Centre. The co-location and facilities access shall be supplied as a separate product as per Sub Annex B_3.
 - (ii) Passive interconnection: where Requesting Licensee requires only optical patching between network-to-network interface ports as part of a Central Office Interconnect (CO-IX) Service or fibre has been laid by Requesting

Licensee and therefore no co-location is provided; CO-IX Service is not covered as a part of this Agreement.

- 3.8** ‘Connect with ONT’ Service includes the physical installation and setting up of the End-User’s ONT and Wi-Fi Routers by Oman Broadband at the End-User’s location as part of the BEUC Service delivery. Oman Broadband takes no responsibility for maintenance of ONT and Wi-Fi Router and any equipment after the Customer Access Point (CAP); this includes the patch cords, which remain under the full ownership of Requesting Licensee and are the responsibility of Requesting Licensee.

4 Product Specifications

- 4.1 BEUC is a purely passive optical product with demarcation points at the ODF in Oman Broadband Data Centre and the CAP in the customer's Premises.
- 4.2 It is designed to be used with PON equipment, with an Optical Line Terminal (OLT) in a Data Centre site and an ONT in the End-User's Premises.
- 4.3 The ONT and OLT would be installed separately by Requesting Licensee – unless Requesting Licensee opts for Connect with ONT Service as defined in Clause 3.3.
- 4.4 The product includes a 1:32 optical splitter installed in the FDH. It is a centralised architecture with all splitters at the FDH.
- 4.5 The passive fibre network is pre-built up to the NAP. An NAP typically serves multiple Premises and 25mm conduit is pre-installed from NAP to boundary wall of End-User's Premises.
- 4.6 When an order to activate an End-User (Connect order) is received, then:
 - (i) The 25mm conduit is extended from the boundary wall to the house exterior wall;
 - (ii) A CAP is installed inside the Premises;
 - (iii) Fibre cables are installed from the NAP to the CAP;
 - (iv) A fibre patch cord is installed at the FDH to connect the distribution fibre to a splitter port.
- 4.7 In general, multiple fibres are taken into the Premises from the NAP to the CAP, although only one distribution fibre may be active from the FDH to the Data Centre site.
- 4.8 Although the network is pre-built, connections to splitter ports are made on demand. This results in maximum efficiency of OLT ports for Requesting Licensee.
- 4.9 Sufficient capacity is provided so that Requesting Licensee can provide service to 100% of the tenancies within the footprint.
- 4.10 Oman Broadband will only use fibre-optic cable based on the ITU-T G.652D standard for the distribution network outdoor installations and the ITU-T G.657A standard for the final-drop cable in-building installations (where applicable) to deliver the BEUC.
- 4.11 Oman Broadband will test the fibre-optic cable from Oman Broadband's ODF at its designated Data Centre to the CAP at the End-User Premises to ensure that the BEUC falls within the specified optical performance.

4.12 Oman Broadband shall ensure that the optical power loss of any BEUC does not exceed –25dB.

The End-User Equipment

4.13 During the network build, a 25mm conduit tube is installed from the NAP to the outside boundary wall of the Premises. The conduit contains a drawstring but no fibre cable.

4.14 The installation process involves extending the 25mm conduit tube from the boundary wall to the outside wall of the Premises. A small fibre cable is then drawn through the conduit from the NAP and taken into the Premises. A CAP is installed in the Premises and the fibre Cable Terminates on this box.

4.15 Oman Broadband's policy is to locate the CAP at a place convenient to the End-User, and this is discussed with the End-User during the survey visit. Oman Broadband reserves the right to locate the CAP at an alternative location should the request from the End-User be deemed to be unreasonable, for example if the distance from the cable entry point in the tenancy to the proposed CAP position is greater than 25m in length.

4.16 Requesting Licensee installs a connectorised patch cord into the CAP in order to connect to an OLT, also installed by Requesting Licensee. The installation of the OLT and patch cord currently requires an independent visit to the End-User by Requesting Licensee. Requesting Licensee is responsible for the installation of this patch cord. It is installed as part of the Optical Network Terminal (ONT) installation process. The demarcation point (end point of Oman Broadband network) is the CAP.

Combined BEUC and ONT Installation

4.17 Although the BEUC Service demarcation point is at the CAP, Oman Broadband also provides an optional ONT installation service, on behalf of Requesting Licensees. This entails the fitting of the ONT during the installation appointment with the End-User, therefore reducing the need for a follow-up visit by Requesting Licensee.

4.18 In general, the ONT will be desk mounted and connected to the CAP using a patch cord up to 3m in length. Requesting Licensees may use a combined ONT/Wi-Fi Router or provide separate pieces of equipment. Some minor configuration of the ONT and Wi-Fi Router may be required, such as resetting of user names and passwords. During the ONT installation process, the internet (and other) service(s) would be activated through co-ordination with the NOC of Requesting Licensee. Requesting Licensee, who also remains responsible for maintenance, undertakes inventory management of the ONT.

5 Term of Contract

- 5.1** The minimum contract term for a BEUC shall be six (6) months starting from the service activation date of the BEUC (“Basic End-User Minimum Contract Term”).
- 5.2** The contract term beyond the Minimum Contract Term shall be renewed automatically on a monthly basis until the Service is terminated by Requesting Licensee when it sends a request for disconnection to Oman Broadband.

6 Orders and Delivery

- 6.1** Orders and delivery shall be as per Annex D.
- 6.2** The timeframes related to provisioning work for BEUC Service to be undertaken by Oman Broadband in this Agreement may be subject to delays caused by events outside of Oman Broadband's reasonable control, in which case such failure to meet the timeframes shall not constitute a breach of this Agreement, and this Clause of this Agreement shall not apply. Oman Broadband must notify Requesting Licensee as soon as practicable upon the occurrence of such an event, stating the cause and specifying a new commitment date for completion of the relevant provisioning work.

7 Service Assurance and Performance

7.1 The service assurance and performance shall be as per Annex D.

8 Pricing

8.1 The pricing shall be as per Annex E.

9 Fault Handling

9.1 Processes for fault handling shall be as per Annex D.

10 Network Operations and Maintenance

10.1 Refer to the Main Body of the Agreement and Annex D.

11 Forecasts

11.1 Refer to the Main Body of the Agreement.