

## **SCHEDULE 1**

### **Residential End-User Connection**

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### RESIDENTIAL END-USER CONNECTION

#### CONTENTS

<b><u>1. SCOPE</u></b>	<b>1</b>
<b><u>2. SERVICE LEVEL GUARANTEES</u></b>	<b>1</b>
<b><u>3. SERVICE DESCRIPTION AND ACCESS POINTS</u></b>	<b>4</b>
<b><u>4. ORDERING AND PROVISIONING PROCEDURE</u></b>	<b>6</b>
<b><u>5. RESIDENTIAL END-USER CONNECTION REQUEST</u></b>	<b>6</b>
<b><u>6. DELIVERY</u></b>	<b>9</b>
<b><u>7. RESPONSIBILITY AT DP AND OPENNET FDF</u></b>	<b>12</b>
<b><u>8. DEACTIVATION</u></b>	<b>12</b>
<b><u>9. STANDARD TERMS AND CONDITIONS</u></b>	<b>12</b>
<b><u>10. ACCESS AND APPROVALS REQUIRED</u></b>	<b>14</b>
<b><u>11. FAULT REPORTING AND CLEARING</u></b>	<b>14</b>
<b><u>12. SERVICE LEVEL AVAILABILITY</u></b>	<b>16</b>
<b><u>13. PROTECTION AND SAFETY</u></b>	<b>17</b>
<b><u>14. TERM OF LICENCE</u></b>	<b>17</b>
<b><u>15. SUSPENSION</u></b>	<b>17</b>
<b><u>16. TERMINATION OF LICENCE</u></b>	<b>18</b>
<b><u>17. REDUNDANCY SERVICE</u></b>	<b>20</b>
<b><u>ANNEX 1A: REQUEST FORM FOR RESIDENTIAL END-USER CONNECTION</u></b>	

## **SCHEDULE 1**

### **RESIDENTIAL END-USER CONNECTION**

#### **1. SCOPE**

This Schedule 1 sets out the terms and conditions under which OpenNet will provide the Requesting Licensee with a licence for:

- (i) Layer 1 Service (a service provided by OpenNet for the use of passive optical fibre cable) from OpenNet's designated Central Office (or "CO") to the First Termination Point of a Residential Premise for the purpose of the Requesting Licensee providing GPON services; or
- (ii) Layer 1 Service from OpenNet's designated CO to the First Termination Point of a Residential Premise for the purpose of the Requesting Licensee providing OE services

**(Residential End-User Connection).**

1.1 The Residential End-User Connection is a service provided by OpenNet to the Requesting Licensee for the purpose of delivering GPON or OE services over the Layer 1 Services highlighted above to a Residential Premise at a:

- (a) High-Rise Residential Building/Non-Residential Building; or
- (b) Landed Residential Premise.

1.2 For the avoidance of doubt, OpenNet may provide a Residential End-User Connection via the 1<sup>st</sup> or 2<sup>nd</sup> fibre installed in the First Termination Point, and all terms and conditions of this Schedule 1 shall apply regardless of which fibre is used.

1.3 This Schedule only applies to Requesting Licensees who are FBOs.

#### **2. SERVICE LEVEL GUARANTEES**

2.1 OpenNet will provide the Service Level Guarantees in respect of Residential End-User Connection as set out in this Schedule. If OpenNet fails to meet any service activation period, Mean Time To Recovery or service level availability

(collectively called the **Service Level Guarantees**) applicable to this Schedule and the failure to meet the Service Level Guarantees is solely caused by OpenNet, its contractors and/or suppliers, OpenNet will provide a remedy in the form of a rebate to the Requesting Licensee in accordance with:

- (i) Clause 6.10 and any terms and conditions contained in this Schedule in respect of request and provisioning timeframes;
- (ii) Clause 11.14 and any terms and conditions contained in this Schedule in respect of fault rectification timeframes; and
- (iii) Clause 12.1 and any terms and conditions contained in this Schedule in respect of service level availability.

2.2 A claim by the Requesting Licensee shall be made in writing within thirty (30) Calendar Days of the completion of the relevant calendar month on which the Service Level Guarantees are measured. The amount in respect of any claim shall be paid to the Requesting Licensee in the form of a rebate. The Requesting Licensee acknowledges that a failure to make a claim within the specified timeframes under this paragraph means that the Requesting Licensee waives any entitlement to the Service Level Guarantee payment in respect of that claim.

2.3 If the Requesting Licensee is entitled to a rebate pursuant to the claim made hereunder, the amount of the rebate will be credited into the Requesting Licensee's account after it has been processed by OpenNet and will be reflected in OpenNet's bill to the Requesting Licensee in accordance with OpenNet's billing cycle.

2.4 The guarantee and rebates provided by OpenNet are:

- (i) of an ex-gratia nature and personal to the Requesting Licensee and are non-transferable; and
- (ii) subject to this Schedule.

2.5 Despite anything to the contrary in this section, if the Requesting Licensee qualifies for any claim, OpenNet shall honour its obligations in respect of that claim but in the event of a dispute as to whether the Requesting Licensee qualifies for a claim or as to the quantum of the claim payable to the Requesting Licensee, the dispute shall be resolved in accordance with the Dispute Resolution

Procedures in Schedule 17 of the ICO Agreement, or in the case of a Billing Dispute, in accordance with Schedule 16 of the ICO Agreement.

2.6 In addition to the specific terms and conditions of the Service Level Guarantees, the Service Level Guarantees shall not apply in any of the following circumstances:

- (a) the Residential End-User Connection is disconnected and/or reconnected by reason of it being suspended under the terms and conditions of this Schedule or ICO Agreement, except where the suspension is due to OpenNet's fault;
- (b) fault due to any equipment, wiring and/or cabling owned or operated by the Requesting Licensee or on behalf of the Requesting Licensee;
- (c) provision or restoration of the Residential End-User Connection where any site-coordination meeting, Joint Investigation Meeting or fault identification coordination meeting is involved, except where (a) the fault was caused by OpenNet; and (b) the Requesting Licensee has not contributed to any delay in setting up the meeting. Notwithstanding the above, in determining whether the Service Level Guarantees have been met by OpenNet, the time taken from the start of arranging any site-coordination meeting, Joint Investigation Meeting or fault identification coordination meeting up to the end of the meeting, shall always be excluded;
- (d) OpenNet needs to obtain or maintain any licence or permission necessary to the provision or restoration of the Residential End-User Connection. Notwithstanding the above, in determining whether the Service Level Guarantees have been met by OpenNet, the time taken by OpenNet to obtain or maintain any licence or permission necessary to the provision or restoration of the Residential End-User Connection shall always be excluded;
- (e) OpenNet has difficulty accessing or working in the building or Residential End-User's Premise due to the building or premise being inaccessible, in unsafe working condition or in any other inadequate or deficient state;
- (f) delay in the provision or restoration of the Residential End-User Connection caused by events beyond OpenNet's reasonable control;

- (g) OpenNet network outages for which the Requesting Licensee has not reported a fault;
  - (h) fault is reported by the Requesting Licensee but no fault is found or confirmed after due and careful investigation, and verification by OpenNet;
  - (i) OpenNet is required to carry out scheduled service interruption and the Requesting Licensee has been informed in accordance with clause 9.5; or
  - (j) OpenNet is required to carry out fibre diversion at the request of the Government Agencies, private developers or other relevant parties and the Requesting Licensee has been informed in accordance with clause 9.5.
- 2.7 If the Requesting Licensee disputes OpenNet's reason for rejection, its records and/or the amount of rebate, the Requesting Licensee shall not be entitled to be credited with any rebate until and unless the dispute has been resolved.
- 2.8 A failure by OpenNet to meet any Service Level Guarantee does not constitute a breach of the ICO Agreement or this Schedule.
- 2.9 The Requesting Licensee acknowledges that the relevant remedy provided under clause 2.1 is a genuine pre-estimate of the Requesting Licensee's loss and will be the sole and exclusive remedy available to the Requesting Licensee for such failure to meet the relevant Service Level Guarantees for any Residential End-User Connection and shall be OpenNet's sole and exclusive liability to the Requesting Licensee for such failure.

### **3. SERVICE DESCRIPTION AND ACCESS POINTS**

- 3.1 (A) Where the Requesting Licensee requests for Residential End-User Connection for the purpose of providing GPON services to the End-User, OpenNet will provide a licence for Residential End-User Connection of 1:24 Split Ratio to the Requesting Licensee with the following:
- (a) one (1) fibre strand from OpenNet's Fibre Distribution Frame (**FDF**) at the Central Office designated by OpenNet to OpenNet's splitter at the Building MDF Room for each group of twenty four (24) Residential Premises (or portion thereof);

- (b) one (1) dedicated fibre strand from the splitter to the First Termination Point of the Residential Premise;
- (c) one (1) Patching Service at OpenNet's FDF at the Building MDF Room;  
and
- (d) where necessary, one (1) Patching Service at OpenNet's FDF in the Central Office will be provided and the Requesting Licensee shall pay a Patching Charge in accordance with Schedule 15 (Charges).

Unless reasonably considered necessary by OpenNet, OpenNet shall utilise at least 90% of the connections in each splitter before an additional splitter is provisioned.

3.1 (B) Where the Requesting Licensee requests for Residential End-User Connection for the purpose of providing OE services to the End-User, OpenNet will provide a licence for Residential End-User Connection of 1:24 Split Ratio to the Requesting Licensee with the following:

- (a) two (2) fibre strands from OpenNet's FDF at the Central Office designated by OpenNet to OpenNet's FDF at the Building MDF Room for each group of twenty four (24) Residential Premises (or portion thereof);
- (b) one (1) dedicated fibre strand to the First Termination Point of the Residential Premise from OpenNet's FDF at the Building MDF Room;
- (c) up to three (3) Patching Services at OpenNet's FDF in the Building MDF Room; and
- (d) where necessary, two (2) Patching Services at OpenNet's FDF in the Central Office will be provided and the Requesting Licensee shall pay a Patching Charge in accordance with Schedule 15 (Charges).

3.2 For a Residential End-User Connection of 1:1 Split Ratio to the End-User, OpenNet will not provide any splitter at the Building MDF Room. OpenNet will provide:

- (a) one (1) dedicated fibre strand from OpenNet's FDF at the Central Office designated by OpenNet to OpenNet's FDF at the Building MDF Room;

- (b) one (1) dedicated fibre strand from OpenNet's FDF at the Building MDF Room to the First Termination Point of the Residential Premise;
  - (c) one (1) Patching Service at OpenNet's FDF in the Building MDF Room;
  - (d) one (1) Patching Service at OpenNet's FDF in the Central Office and the Requesting Licensee shall pay a Patching Charge in accordance with Schedule 15 (Charges).
- 3.3 Where the Requesting Licensee requests for Residential End-User Connection of 1:24 Split Ratio for the purpose of providing GPON services to the End-User or Residential End-User Connection of 1:1 Split Ratio, the Requesting Licensee shall access the Residential End-User Connection at OpenNet's FDF at the Central Office designated by OpenNet or the Requesting Licensee's FDF at the Central Office designated by OpenNet and at the First Termination Point of the Residential Premise.
- 3.4 Where the Requesting Licensee requests for Residential End-User Connection of 1:24 Split Ratio for the purpose of providing OE services to the End-User, the Requesting Licensee shall access the Residential End-User Connection at OpenNet's FDF at the Central Office designated by OpenNet or the Requesting Licensee's FDF at the Central Office designated by OpenNet, at OpenNet's FDF at the Building MDF Room and at the First Termination Point of the Residential Premise.
- 3.5 Where the Requesting Licensee wishes to acquire subsequent fibre connection from CO to Building MDF Room, the Requesting Licensee shall acquire such fibre connection in accordance with Schedule 5 (CO to Building MDF Room Connection).
- 3.6 Where the Requesting Licensee acquires a Residential End-User Connection of 1:24 Split Ratio for the purpose of providing OE services to the End-User, the Requesting Licensee shall ensure the Residential End-User Connection is connected to active Optical Ethernet equipment.

#### 4. ORDERING AND PROVISIONING PROCEDURE

- 4.1 The Requesting Licensee shall submit its request for Residential End-User Connection (**Request**) to OpenNet on a Business Day in the form of Annex 1A stating, but not limited to the following information:



- (a) the End-User's name, telephone number and address of the Residential Premise; and
  - (b) the Split Ratio required.
- 4.2 Relocation of the Residential End-User Connection is not allowed. In the event that the Residential End-User has relocated, the Requesting Licensee shall submit a request for the termination of the existing Residential End-User Connection and request for a new Residential End-User Connection at the new Residential Premise in accordance with this Schedule.
- 4.3 For the avoidance of doubt, change of use from GPON to OE or from OE to GPON is allowed subject to the Requesting Licensee paying the applicable charges for Patching Service in accordance to Schedule 15 (Charges).
- 4.4 OpenNet shall at its sole discretion determine the serving CO and Building MDF Room from which the Residential End-User Connection will be provided.
- 4.5 Initially, information relating to the Mandated Services will be available on OpenNet's website, for access by the Requesting Licensee through secured means. The secured access to OpenNet's website will require the payment of a Per User Account Charge (specified in clause 14 of Schedule 15 (Charges)) for each user account created. Initially, information relating to network outages will be sent to the Requesting Licensee via email. The information relating to the Mandated Services and the information relating to network outages shall be made available on the OpenNet Platform in due course. For the avoidance of doubt, such Per User Account Charge shall not be re-imposed when the information relating to Mandated Services is made available on the OpenNet Platform.

## **5. RESIDENTIAL END-USER CONNECTION REQUEST**

- 5.1 OpenNet shall process all Requests for Residential End-User Connection on a 'first come, first served' basis.
- 5.2 For each week, OpenNet shall process a combined total of no more than 2050 Requests for Basic Mandated Services and Layer 1 Redundancy Services (**Maximum Quota**) from all Requesting Licensees, and a weekly roll-over mechanism shall apply for additional Requests beyond the Maximum Quota. For avoidance of doubt, OpenNet will process additional Requests beyond the Maximum Quota in the next available week on a 'first come, first served' basis.

5.3 Within one (1) Business Day of the date on which OpenNet receives the request for Residential End-User Connection (**Request Date**) and subject to clause 5.2, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) if its Request is rejected for any one of the following reasons:

- (a) the Request for Residential End-User Connection is not in the prescribed form;
- (b) the Request does not contain all the required information or the information provided is inaccurate or misleading;
- (c) the service activation date requested is less than three (3) Business Days from the date of receipt of a Request; or
- (d) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

5.4 Within three (3) Business Days of the Request Date and subject to clause 5.2, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) whether its Request is accepted, or if rejected, for any one of the following reasons, except where there is insufficient capacity, OpenNet must also notify the Requesting Licensee within three (3) Business Days of the Request Date that there is insufficient capacity and the timeframe to notify the acceptance or rejection of the Request shall be extended to within ten (10) or forty (40) Business Days of the Request Date:

- (a) the equipment or services that the Requesting Licensee proposes to use or to provide interfere with, or cause deterioration to services supplied by OpenNet;
- (b) there is obstruction from building owner, building management, home owner or End-User to OpenNet installation or installation schedule;
- (c) the Transmission Tie Cable (installed pursuant to Co-location Service in Schedule 12) for connection to the Residential End-User Connection is yet to be operational at the point in time of OpenNet's provisioning of the Residential End-User Connection;
- (d) OpenNet has not rolled out its Network to the Building; or

- (e) there are security and confidentiality requirements or restrictions imposed on OpenNet by Government Agencies.

5.5 If there is sufficient capacity to provide the Residential End-User Connection pursuant to clause 6.1, OpenNet shall advise the Requesting Licensee within three (3) Business Days whether the Residential End-User Connection has been successfully set up. In the event that there is insufficient capacity to provide the Residential End-User Connection pursuant to the Request, clause 6.2 shall apply and OpenNet shall advise the Requesting Licensee within either ten (10) or forty (40) Business Days (as the case may be) whether the Residential End-User Connection has been successfully set up.

5.6 The Requesting Licensee shall pay OpenNet the applicable Installation Charge and Patching Charge specified in Schedule 15 (Charges) for provisioning the Residential End-User Connection.

5.7 Where OpenNet rejects any Request for Residential End-User Connection, OpenNet shall provide reasons explaining the basis for rejection.

## **6. DELIVERY**

6.1 Subject to clauses 5.2, 5.3, 5.4 and 6.2, OpenNet shall provide the Residential End-User Connection by the end of three (3) Business Days from the receipt of a valid Request from the Requesting Licensee, where OpenNet has deployed its Network to the Distribution Point, Final Distribution Point or First Termination Point of the Residential Premise. OpenNet shall use its reasonable endeavours to install the First Termination Point of the Residential Premise during the Requesting Licensee's preferred session.

6.2 Where there is insufficient capacity to provide the Residential End-User Connection, OpenNet shall subject to clause 5.2 provide the Residential End-User Connection:

- (a) within ten (10) Business Days from the receipt of a valid Request from the Requesting Licensee if additional capacity is required to be installed between the FTTB Node of the Residential Premise and the First Termination Point of the Residential Premise; or

- (b) within forty (40) Business Days from the receipt of a valid Request from the Requesting Licensee if additional capacity is required to be installed between the designated Central Office and the First Termination Point of the Residential Premise.

OpenNet shall use its reasonable endeavours to install the First Termination Point of the Residential Premise during the Requesting Licensee's preferred session.

- 6.3 Where the home owner has previously refused OpenNet's entry to the premise, OpenNet will provide internal cabling within the Residential Premise using PVC trunking up to a maximum distance of 15 metres to the First Termination Point, measured from the point of entry to the Residential Premise to the First Termination Point. If the owner of a Residential Premise requests the installation of internal cabling that exceeds 15 metres and/or requires the use of deployment technique other than open ducting, OpenNet shall inform the Requesting Licensee and both parties shall mutually agree to a revised implementation timeline which shall not be subject to the provisioning Service Level Guarantee. The Requesting Licensee shall pay the additional charges for installation of internal cabling which exceeds 15 metres in accordance to Schedule 15 (Charges). For the avoidance of doubt, where the owner of a Residential Premise requires the use of deployment technique other than open ducting, such deployment shall be provided by a third party
- 6.4 Unless otherwise stated, OpenNet shall retain the responsibility for working at OpenNet's FDF at the Central Office and Building MDF Room, FTTB Node and First Termination Point, including Patching Service at OpenNet's FDF at the Central Office, Building MDF Room and FTTB Node in accordance with Schedule 13 on Patching Services. The Requesting Licensee shall bear the Charges for such work carried out by OpenNet.
- 6.5 Where the Requesting Licensee requests Residential End-User Connection for the purpose of providing OE services to the End-User, OpenNet will provide the necessary Patching Service at OpenNet's FDF in the Building MDF Room using Patch Cable of not exceeding ten (10) metres in length. The Requesting Licensee shall provide its own Patch Cable if it requires a longer Patch Cable. For the avoidance of doubt, where the Requesting Licensee provides its own Patch Cable, OpenNet will not offer and Requesting Licensee shall not request for any rebate or discount over the Patching Service or the Residential End-User Connection.

6.6 OpenNet will use optical fibre cable based on the ITU-T G.652D standard for outdoor installations and the ITU-T G.657A standard for in-building installations (where applicable) to deliver the Residential End-User Connection.

~~6.7 OpenNet will test the optical fibre cable from OpenNet's FDF at its designated Central Office or the Requesting Licensee's FDF at the Central Office designated by OpenNet to the First Termination Point at the Residential Premise to ensure that the Residential End User Connection falls within the specified optical performance. Testing will be conducted at wavelengths of 1310nm, 1490nm and 1550nm.~~

~~6.8~~6.7 OpenNet shall ensure that the optical power loss:

- (a) of any Residential End-User Connection for the purpose of provision of GPON services does not exceed -28dB; and
- (b) of any Residential End-User Connection for the purpose of provision of OE services does not exceed -20 dB from OpenNet's FDF in the Central Office or the Requesting Licensee's FDF at the Central Office designated by OpenNet to OpenNet's FDF in the Building MDF Room, and does not exceed -20dB from OpenNet's FDF in the Building MDF Room to the First Termination Point of the Residential Premise.

~~6.9~~6.8 OpenNet shall promptly notify the Requesting Licensee upon the completion of the Residential End-User Connection.

~~6.10~~6.9 Subject to clause 6.4110, in the event OpenNet fails to meet the applicable service activation period for a Request, OpenNet shall compensate the Requesting Licensee an amount equal to the number of days of delay multiplied by the weekly recurring charge for the Residential End-User Connection, subject to a maximum of 30 times the weekly recurring charge for the Residential End-User Connection (**Weekly Recurring Charge**), where:

$$\text{Weekly Recurring Charge} = \text{Monthly recurring charge} \times 7 / 30$$

~~6.11~~6.10 OpenNet shall not be required to compensate the Requesting Licensee under any of the following circumstances:

- (a) Delay in the granting of permission from or permission is not granted by the building owners/management or house owner or End-User to install the required Network to the Residential Premise within the said building;

- (b) Where the owner of a Residential Premise requests the installation of internal cabling that requires more than 15 metres of ducting and/or requires the use of a deployment technique other than open ducting;
- (c) The Requesting Licensee requests the deferment of the service activation date; or
- (d) The building which was initially under network coverage has been reconstructed and OpenNet has to reinstall its Network to the building; or

~~— The service activation date is delayed due to a fault discovered during the Requesting Licensee's initial installation of its equipment.~~

For the avoidance of doubt, where the service activation date has been revised pursuant to any of the circumstances contemplated in this clause 6.1~~01~~ or elsewhere in the ICO Agreement (unless otherwise stated), OpenNet shall nevertheless be required to compensate the Requesting Licensee if it fails to meet the revised implementation timeline.

#### **6A. JOINT INVESTIGATION OF FAULTS**

~~6A.1 If any faults occur during the Requesting Licensee's initial installation of its equipment for each the Residential End-User Connection, the Requesting Licensee shall first perform all necessary checks (which shall be at its own cost) to ensure that such fault does not lie within the Requesting Licensee's network as per clause 11.2., including but not limited to:~~

~~— The Requesting Licensee shall verify that the output of the First Termination Point in the Residential Premise has no optical light or low optical light (Port 1 and/or Port 2).~~

~~— The Requesting Licensee shall use approved test gear (e.g. power meter, patch cord with the right connector – SC/APC).~~

~~— The Requesting Licensee shall use approved cleaning kit to clean dirty connectors and ferrules of the First Termination Point.~~

~~— The Requesting Licensee shall verify that all other connections within the Requesting Licensee's co location are correctly patched.~~

~~— The Requesting Licensee shall record measurement of output of the First Termination Point (Port 1 and/or Port 2).~~

~~The Requesting Licensee shall confirm that the password configured in the GPON Optical Line Terminal (“OLT”) shall be the same as the corresponding GPON Optical Network Terminal (“ONT”).~~

~~For the avoidance of doubt, this Section Clause 6A shall only apply when the Requesting Licensee’s installation of its equipment takes place within twoseven (27) Business Dayscalendar days (excluding Sundays and Public Holidays) from OpenNet’s handover of the First Termination Point to the Requesting Licensee.~~

~~6A.2 Where the Requesting Licensee has performed all necessary checks (which shall be at its own cost) to ensure that such fault does not lie within the Requesting Licensee’s network as per clause 11.2, such fault has not been detected or resolved after the Requesting Licensee has performed all the steps described in Clause 6A.1, then the Requesting Licensee may inform OpenNet and OpenNet shall send a representative to the relevant Residential Premise for a joint investigation with the Requesting Licensee. OpenNet shall use commercially reasonable effortsits best endeavours to ensure that such representative shall arrive at the Residential Premise within one (1) hour from the receipt of such request from the Requesting Licensee. Notwithstanding anything in this Clause 6A to the contrary, the Requesting Licensee may only request for a joint investigation between 9am and 7pm from Mondays to Saturdays, and may not request for a joint investigation on Sundays and Public Holidays.~~

~~6A.3 OpenNet and the Requesting Licensee shall ensure that their representatives are present throughout such joint investigation process. Upon completion of such joint investigation, the OpenNet and Requesting Licensee representatives shall jointly sign off on an investigation report. The format of such investigation report shall be mutually agreed by OpenNet and the Requesting Licenseeconsist of readings, and actions taken byup OpenNet and the outcome ofduring the joint fault investigation.~~

~~6A.4 OpenNet shall be entitled to charge the Requesting Licensee Onsite Charges if:~~  
~~the joint investigation shows that the fault lies within the Requesting Licensee’s network and not on OpenNet’s network and/or the fault is caused or occasioned by the Requesting Licensee; or~~  
~~the Requesting Licensee failed to perform the steps as described in Clause 6A.1 properly, regardless of where the fault is found to lie.~~

~~6A.54 Where the joint investigation shows that the fault is not due to the Requesting Licensee’s networklies on OpenNet’s network, OpenNet shall delay the billing~~

start date for such Residential End-User Connection to the time such fault is rectified. The fault shall be deemed to have been rectified when OpenNet provides a confirmation to the Requesting Licensee that the Residential End-User Connection has been restored. In the event that the joint investigation team encounters any of the circumstances stated in Clause 2.6 above, the billing start date shall not be delayed to the time the fault is rectified, and shall instead begin from the initial service activation date.

6A.65 If OpenNet fails to repair an installation-related fault within seventy-two (72) hours from the commencement of the joint investigation, the Requesting Licensee may elect to cancel such faulty Residential End-User Connection. OpenNet shall waive the cancellation charge if the Requesting Licensee submits OpenNet's standard cancellation form to OpenNet ~~between~~after seventy-two (72) and ~~ninety-six (96) hours~~ from the commencement of the joint investigation but before the fault is rectified. ~~The cancellation charge shall not be waived if the Requesting Licensee does not submit the standard cancellation form to OpenNet between seventy two (72) and ninety six (96) hours from the commencement of the joint investigation, and OpenNet continues the fault rectification works after ninety six (96) hours from the commencement of the joint investigation.~~

6A.76 For the avoidance of doubt, the Requesting Licensee shall not be entitled to make any SLA or MTTR claims for such Residential End-User Connection for the duration of such joint investigation (including but not limited to the time taken to resolve any fault found). The Requesting Licensee hereby acknowledges and agrees that OpenNet shall not be held liable if the joint investigation team encounters any obstructions during the rectification of installation-related faults or any of the circumstances described in Clauses 2.6(e) and 2.6(f) above.

## **7. RESPONSIBILITY AT DP AND OPENNET FDF**

7.1 The Requesting Licensee shall not, and shall ensure that its employees, agents and contractors do not, at any time access OpenNet's FDF at the Central Office and Building MDF Room, the FTTB Node and the Distribution Point.

7.2 Where the Requesting Licensee wishes to change the existing patching connection at OpenNet's FDF at the Central Office or Building MDF Room, the Requesting Licensee shall submit applications for termination of existing Patching Service and an order for new Patching Service at the Central Office or Building MDF Room in accordance with Schedule 13 (Patching Service).



## **8. DEACTIVATION**

- 8.1 Subject to the minimum contract term, the Requesting Licensee may terminate the Residential End-User Connection by giving OpenNet not less than one (1) month prior written notice.
- 8.2 If the Residential End-User Connection service is terminated by the Requesting Licensee pursuant to clause 8.1 before the expiry date of the minimum contract term, the Requesting Licensee must pay OpenNet one hundred percent (100%) of the Monthly Recurring Charge for the remainder of the minimum contract term.
- 8.3 Where any Patching Service is no longer required as a result of the termination of the Residential End-User Connection, OpenNet shall remove the Patching Service at all the relevant access points and the Requesting Licensee shall be liable for the termination charges for removing the Patching Service at the Central Office designated by OpenNet in accordance with Schedule 15 (Charges). Notwithstanding the above, the Requesting Licensee shall not be liable to pay any Charges for the removal of Patching Service related to or in connection with the termination of the Residential End-User Connection, if such termination is the result of OpenNet's fault.

## **9. STANDARD TERMS AND CONDITIONS**

- 9.1 OpenNet shall at its sole discretion determine its network deployment, including but not limited to the access points, fibre cable routing and location of the Central Office, Building MDF Room, FTTB Node, Distribution Point and First Termination Point from which the Residential End-User Connection is provided.
- 9.2 OpenNet shall be responsible for the maintenance of the Residential End-User Connection installed under this Schedule. .
- 9.3 Except to the extent strictly necessary to accurately describe the service to actual or potential Customers, the Requesting Licensee shall not use OpenNet's name, any OpenNet's trademarks or the fact that any service is supplied using OpenNet's Network in promoting the Requesting Licensee's service.
- 9.4 The Parties shall in good faith co-operate with each other and take reasonable measures to ensure that there is no interference with or deterioration to OpenNet's existing services or those of a Third Party as a result of the Requesting Licensee's use of the Residential End-User Connection.

- 9.5 If it is necessary to carry out any scheduled service interruption, including but not limited to planned repair, or replacement or upgrade to any equipment or facility forming part of the Residential End-User Connection, OpenNet shall provide the Requesting Licensee with at least one (1) month's written notice in advance of such interruptions, repairs or upgrades, and shall inform Requesting Licensees of the period of service interruption. OpenNet shall take reasonable measures to minimise any service disruption to the Requesting Licensee.
- 9.6 If the scheduled service interruption affects Residential End-User Connections, OpenNet will carry out the scheduled service interruption between 1:00am and 6:00am, unless it is not feasible for OpenNet to do so.
- 9.7 Subject to Requesting Licensee acquiring redundancy service, OpenNet shall, where technically feasible, provide assistance to Requesting Licensee to divert its Residential End-User Connection to the redundancy service before commencing the scheduled service interruption.
- 9.8 Where there are available resources, OpenNet will, where possible, first divert critical links to alternative routings before commencing the scheduled service interruption.
- 9.9 Subject to clause 9.6, OpenNet shall not be liable for any loss caused by such scheduled service interruption, except for any Service Level Guarantee rebate that arises from OpenNet carrying out the scheduled service interruption outside of the stipulated period and the Requesting Licensee has reported the fault in accordance to clause 11.
- 9.10 The Requesting Licensee shall be responsible to the Requesting Licensee's Customers for all aspects of the Requesting Licensee's services including but not limited to the operations and maintenance of the Requesting Licensee's service.
- 9.11 The Requesting Licensee must procure and maintain at its own cost:
- (a) any equipment or software needed to implement, receive or use the Residential End-User Connection (including but not limited to any configuration of the NTE at the Residential Premise);
  - (b) co-location at the designated Central Office and Building MDF Room;  
and
  - (c) access to the Residential Premise.

9.12 Nothing in this Schedule vests in the Requesting Licensee any right, title or proprietary interest in the optical fibre cable, equipment or facilities forming part of the Residential End-User Connection.

## **10. ACCESS AND APPROVALS REQUIRED**

10.1 The Parties shall comply with clause 15.5 of the main body of this ICO Agreement in relation to the obtaining of all licences, permits, consents, waivers, authorisations and intellectual property or other rights required for the provision of the Residential End-User Connection.

## **11. FAULT REPORTING AND CLEARING**

11.1 Each Party must have or establish a Fault Reporting and Control Centre (**FCC**) to act as a single point of contact for the reporting, management and clearing of faults. The FCC must be available twenty-four (24) hours a day, seven (7) days a week.

11.2 It is the Requesting Licensee's responsibility to determine the source of the fault at its own cost and to ensure that the fault does not lie within its own network before reporting the fault to OpenNet.

11.3 Upon receipt of a fault report from the Requesting Licensee under clause 11.2, OpenNet shall investigate the cause of the fault experienced by the Requesting Licensee in a diligent and responsible manner as would be expected of a competent service provider. OpenNet shall update the Requesting Licensee as and when there is a change in status of the fault investigation/rectification work.

11.4 If, following investigation, OpenNet determines that the fault is at the Transmission Tie Cable at the Central Office, OpenNet will patch the Residential End-User Connection to another available Transmission Tie Cable Port and charge the Requesting Licensee a Patching Charge in accordance with Schedule 15 (Charges) if the Requesting Licensee was responsible for the fault at the Transmission Tie Cable at the Central Office.

11.5 If, following investigation, OpenNet determines that the fault is at the Patch Cable at the Building MDF Room, OpenNet will replace with another Patch Cable(s) and charge the Requesting Licensee a Patching Charge(s) in accordance with Schedule 15 (Charges). OpenNet will charge the Requesting Licensee a Patching Charge if the Requesting Licensee was responsible for the fault at the Patch Cable at the Building MDF Room.

- 11.6 If, following investigation, OpenNet determines that no fault is found or the fault is not due to the OpenNet Network or equipment, then OpenNet shall charge the Requesting Licensee a No Fault Found Charge for the fault report in accordance with Schedule 15 (Charges).
- 11.7 If OpenNet is unable to identify any fault, OpenNet will call for a fault identification coordination meeting between OpenNet and the Requesting Licensee to identify the fault. The Requesting Licensee shall provide all reasonable assistance requested by OpenNet. Each Party is to bear its own cost for attending such fault identification coordination meeting as well as any testing or trouble-shooting activities required as a result of such a meeting.
- 11.8 The Residential End-User Connection is deemed to be restored when OpenNet has tested and confirmed to the Requesting Licensee that the Residential End-User Connection has been restored.
- 11.9 Where the Requesting Licensee has lodged with OpenNet a fault report and OpenNet is in the process of investigating the fault or where the Requesting Licensee has not lodged a fault report but suspect that there is a fault on the Residential End-User Connection, the Requesting Licensee may request OpenNet for a joint investigation. The Requesting Licensee shall propose the date, time and venue for the joint investigation. Subject to OpenNet's resource availability and agreement to the date, time and venue, OpenNet shall attend the joint investigation and charge the Requesting Licensee the Joint Investigation Charge according to Schedule 15 (Charges).
- 11.10 The Requesting Licensee acknowledges that OpenNet may temporarily disconnect the Requesting Licensee's Residential End-User Connection to perform reasonable fault analysis and line testing on the Residential End-User Connection. OpenNet shall conduct such disconnection only as it reasonably considers necessary. OpenNet shall notify the Requesting Licensee at least thirty (30) minutes before the temporary disconnection and provide its reasons for the temporary disconnection.
- 11.11 Each Party shall maintain and store its own records of faults and repairs.

### **Mean Time To Recovery**

- 11.12 OpenNet shall restore any fault within a standard Mean Time To Recovery (MTTR) of eight (8) hours.

11.13 Subject to clause 2.6, the MTTR shall be the average time OpenNet took to restore service for all fault incidents for all Residential End-User Connections acquired by the Requesting Licensee under this Schedule during a month, measured from the time each fault is reported by the Requesting Licensee to the time OpenNet confirms that the fault is restored, excluding fault incidents where OpenNet is prevented or restricted from restoring the service owing to matters that are not within OpenNet’s control. For the avoidance of doubt, the MTTR is calculated as follows:

$$\frac{\sum X}{Y}$$

Where X = Time taken to restore fault incidents for each Residential End-User Connection during a month as described above

Y = Total number of affected Residential End-User Connections in the same month

11.14 In the event OpenNet fails to meet the standard MTTR for a particular month, OpenNet shall compensate the Requesting Licensee an MTTR Rebate equal to the difference between the MTTR experienced by the Requesting Licensee and the standard MTTR in terms of number of days, multiplied by the number of services affected, multiplied by the Weekly Recurring Charge for the Residential End-User Connection, subject to a maximum of 30 times the Weekly Recurring Charge for the Residential End-User Connection.

**12. SERVICE LEVEL AVAILABILITY**

12.1 OpenNet shall offer a service level availability of 99.99% per month for the Residential End-User Connection. OpenNet shall offer to rebate the Requesting Licensee ten percent (10%) of the Monthly Recurring Charge if OpenNet fails to meet the service level availability for that month.

12.2 Service level availability for the Residential End-User Connection is calculated as follows:

$$\frac{(A - B)}{(A)} \times 100\%$$

Where  $A = 24 \text{ hours} \times \text{number of days for the month (in hours)}$ ; and

$B = \text{total network outage time for the Residential End-User Connection in the same month (in hours)}$

- 12.3 Subject to clause 2.6, the total network outage time is the sum of all minutes for which the Requesting Licensee Residential End-User Connection is unavailable, measured from the time each fault is reported by the Requesting Licensee to the time OpenNet confirms that the fault is restored, excluding fault incidents where OpenNet is prevented or restricted from restoring the service owing to matters that are not within OpenNet's control.

### **13. PROTECTION AND SAFETY**

- 13.1 Each Party is responsible for the safe operation of its Network and in particular the safe operation of any equipment within its Network on its side of the connection at the designated Central Office and the Residential Premise.

- 13.2 Each Party shall, so far as reasonably practicable, take all necessary steps to ensure that the licence of the Residential End-User Connection, its operations and its implementation of this Schedule:

- (a) do not endanger the safety or health of any person, including the employees and contractors of the Parties; and
- (b) do not damage, interfere with or cause any deterioration in the operation of the OpenNet Network.

### **14. TERM OF LICENCE**

- 14.1 The minimum contract term for a Residential End-User Connection shall be twelve (12) months starting from the service activation date of the Residential End-User Connection.

### **15. SUSPENSION**

- 15.1 OpenNet may suspend the Requesting Licensee's licence to the Residential End-User Connection at any time until further notice to the Requesting Licensee if the Residential End-User Connection licence causes or is likely to cause physical or technical harm to any telecommunications network, system or services (whether

of OpenNet or any other person) including but not limited to causing damage, interfering with or causing deterioration in the operation of the OpenNet Network. If the suspension is the result of the Requesting Licensee's fault, the Requesting Licensee shall continue to pay the Monthly Recurring Charge during the period of suspension.

15.2 Without limiting the exclusions or limitations of liability in this ICO Agreement, OpenNet shall not be liable to the Requesting Licensee for any Loss resulting from, or in connection with, suspension of a Residential End-User Connection licence under this clause 15.

## **16. TERMINATION OF LICENCE**

16.1 The Requesting Licensee shall keep OpenNet informed on the Requesting Licensee's utilisation of each Residential End-User Connection six (6) months from the service activation date and when there are changes to the utilisation.

16.2 The Requesting Licensee must use or activate a service to a Retail Service Provider using the Residential End-User Connection within six (6) months from the service activation date of the Residential End-User Connection. If the Requesting Licensee fails to do so, OpenNet will deactivate the Residential End-User Connection upon giving the Requesting Licensee ten (10) Business Days prior notice, and the Requesting Licensee did not dispute such written notice given by OpenNet. The Requesting Licensee must pay OpenNet the Monthly Recurring Charges for the remainder of the minimum contract term.

16.3 OpenNet may immediately terminate a licence of Residential End-User Connection under this Schedule if:

- (a) the Requesting Licensee is no longer an FBO;
- (b) the OpenNet ICO is revoked by the Authority under clause 12.8 of the ICO Agreement;
- (c) the Authority removes the requirement for OpenNet to supply Residential End-User Connection under the OpenNet ICO or exempts OpenNet from supplying Residential End-User Connection under the ICO Agreement, provided that the date of termination shall not be earlier than the effective date of the Authority's decision;

- (d) in OpenNet's reasonable opinion, the Requesting Licensee is using the Residential End-User Connection in contravention of an applicable law, licence, code, regulation or direction and OpenNet has the necessary confirmation from the relevant Government Agencies that the Requesting Licensee is in contravention of the applicable law, licence, code, regulation or direction;
- (e) in OpenNet's reasonable opinion, the Requesting Licensee is using the Residential End-User Connection in a manner which places or allows a Third Party to act in contravention of an applicable law, licence, code, regulation or direction and OpenNet has the necessary confirmation from the relevant Government Agencies that the Third Party is in contravention of the applicable law, licence, code, regulation or direction;
- (f) the Residential End-User Connection is used other than the purposes specified in clause 1;
- (g) the licence in respect of Co-Location Space to which the Residential End-User Connection is connected has been terminated or has expired;
- (h) the Residential End-User Connection has become unsafe for its purpose;  
or
- (i) OpenNet's right to own, maintain or operate the Residential End-User Connection has been revoked or terminated, or has expired.

16.4 Either Party (**Terminating Party**) may terminate the Residential End-User Connection:

- (a) if the other Party is in breach of this Schedule other than failure to pay any sum for which the Requesting Licensee has been invoiced, and such breach remains un-remedied for a period of sixty (60) Calendar Days after receiving notice from the Terminating Party;
- (b) if the Requesting Licensee's Residential End-User Connection licence has been suspended pursuant to clause 15.1, and the cause of such suspension has not been remedied or rectified for a period of sixty (60) Calendar Days from the date of the suspension; or
- (c) if the Requesting Licensee is in breach of this Schedule by its failure to pay any sum for which the Requesting Licensee has been invoiced, and



such breach remains un-remedied for a period of fourteen (14) Calendar Days after receiving notice from the Terminating Party. For the avoidance of doubt, this sub-clause shall not apply pending the resolution of any Billing Dispute in accordance with the provisions of Schedule 16 (Billing).

16.5 Upon termination of the licence of Residential End-User Connection:

- (a) the Requesting Licensee must immediately discontinue the use of the Residential End-User Connection; and
- (b) the Requesting Licensee must without undue delay disconnect all equipment connected to the Residential End-User Connection; and
- (c) OpenNet shall be responsible for removing all necessary Patching Services at the Requesting Licensee's cost in accordance with Schedule 15 (Charges). Notwithstanding the above, the Requesting Licensee will not be liable for OpenNet's costs of removing all necessary Patching Services at the Building MDF Room, or if the termination is the result of OpenNet's fault

16.6 If the licence of a Residential End-User Connection is terminated as a result of the Requesting Licensee's fault, the Requesting Licensee shall be liable to OpenNet for the Monthly Recurring Charges for the remainder of the minimum contract term.

16.7 If the Requesting Licensee fails to disconnect its equipment from the Residential End-User Connection under clause 16.6(b), OpenNet may at its sole discretion remove and/or dispose of the Requesting Licensee's equipment. The Requesting Licensee shall pay to OpenNet all reasonable costs associated with the work undertaken by OpenNet including the cost of disposing the Requesting Licensee's equipment. The Requesting Licensee shall have no claim whatsoever against OpenNet in connection with the removal and/or disposal of the Requesting Licensee's equipment from the Residential End-User Connection.

## **17. REDUNDANCY SERVICE**

17.1 The Requesting Licensee may acquire:

- (a) for a Residential End-User Connection of 1:24 Split Ratio for the purpose of providing GPON services, one separate fibre strand from OpenNet's

splitter at the Building MDF Room to the First Termination Point of the Residential Premise;

- (b) for a Residential End-User Connection of 1:24 Split Ratio for the purpose of providing OE services, one separate fibre strand from OpenNet's FDF at the Building MDF Room to the First Termination Point of the Residential Premise; or
- (c) for a Residential End-User Connection of 1:1 Split Ratio, one separate fibre strand from OpenNet's FDF at the CO to the First Termination Point of the Residential Premise

**(Redundancy Service)** at the same prices, terms and conditions as the Residential End-User Connection through a request in the form of Annex 1A, unless stipulated otherwise in this clause 17.

- 17.2 OpenNet shall provide the Redundancy Service via the same duct and along the same path as the existing Residential End-User Connection, without Duct Diversity and without Path Diversity. OpenNet may provide the Redundancy Service using a separate fibre strand from the same fibre cable that carries the existing Residential End-User Connection. OpenNet shall have the right to reject a request for the Redundancy Service if both fibres in the First Termination Point are in use.
- 17.3 The Requesting Licensee is eligible to acquire a Redundancy Service for the Residential End-User Connection provided that the Requesting Licensee has acquired or is acquiring an equivalent Residential End-User Connection to the same Residential Premise. The Requesting Licensee may request OpenNet to reject the Request for the Residential End-User Connection in the event that OpenNet is unable to provide the Redundancy Service, but such Requests for the Residential End-user Connection and the Redundancy Service must be submitted together to OpenNet.
- 17.4 The Requesting Licensee shall be responsible, at its own cost and equipment, for the implementation of diversity or redundancy for its services using the Redundancy Service provided by OpenNet.
- 17.5 OpenNet shall make the Redundancy Service available to the Requesting Licensee, except where OpenNet is unable to build the requisite infrastructure (other than fibre) to provide the Redundancy Service or due to any of the reasons stated in clause 5.4.

**ANNEX 1A: REQUEST FORM FOR RESIDENTIAL END-USER CONNECTION**

**Request for Residential End-User Connection**

Date of Application: \_\_\_\_\_ Application Reference Number: \

Requested Date of Activation: \_\_\_\_\_

Preferred Installation Session\*: AM/PM

Residential End-User Telephone Number: \_\_\_\_\_

Residential End-User Name: \_\_\_\_\_

Residential End-User Address: \_\_\_\_\_

Requesting Licensee

Split Ratio: 1:1 / 1:24

Technology: GPON / OE  
(only applicable for 1:24 Split Ratio)

Any other info: \_\_\_\_\_

- Redundancy Service is required
- Request for Residential End-User Connection to be rejected if Redundancy Service is not available

The Requesting Licensee acknowledges that by submitting this Request Form, it undertakes to pay any additional charges which may be imposed by OpenNet pursuant to clause 6.3 of Schedule 1. For avoidance of doubt, the Requesting Licensee is still liable for the applicable Monthly Recurring Charge and one-time charges.

For and on Behalf of Requesting Licensee

Sign: \_\_\_\_\_ Company Stamp: \_\_\_\_\_

Name: \_\_\_\_\_ Company Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Contact Number, Fax and email address: \_\_\_\_\_

Requesting Licensee

Part 1: Date: \_\_\_\_\_

Application accepted:  
Circuit Identification Number: \_\_\_\_\_

Tentative Provision Date : \_\_\_\_\_ Provide internal cabling to First Termination Point (Y/N)

OpenNet

Application rejected  
Reason for rejection: \_\_\_\_\_

OpenNet Name / Signature: \_\_\_\_\_ Queue Status: \_\_\_\_\_

Part 2: Date: \_\_\_\_\_

Circuit Provision:  
Revised Provision Date (where applicable): \_\_\_\_\_

Reason: \_\_\_\_\_

OpenNet

Application rejected  
Reason for rejection: \_\_\_\_\_

OpenNet Name / Signature: \_\_\_\_\_