

**APPENDIX 2**

**REQUIRED MODIFICATIONS TO SCHEDULE 2 – NON-RESIDENTIAL END-  
USER CONNECTION**

## **SCHEDULE 2**

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

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### NON-RESIDENTIAL END-USER CONNECTION

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## SCHEDULE 2

### NON-RESIDENTIAL END-USER CONNECTION

**IDA Directed Modifications: For the Residential End-User Connection service, OpenNet has proposed to delay the billing start date until an installation-related fault on the Residential End-User Connection service is rectified. Similarly, for the Non-Residential End-User Connection service, IDA considers that there is merit in OpenNet delaying the billing start date until an installation-related fault on a Non-Residential End-User Connection is rectified. Accordingly, IDA directs OpenNet to propose, for IDA's approval, the necessary modifications to this Schedule to effect the above.**

#### 1. SCOPE

This Schedule 2 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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends, 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 the Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends, for the purpose of the Requesting Licensee providing OE services

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

- 1.1 The Non-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 at a Non-Residential Premise. For the avoidance of doubt, OpenNet is only obliged to provide Non-Residential End-User Connections through the 1<sup>st</sup> fibre strand in the First Termination Point. OpenNet may, on a case-by-case basis, provide a Non-Residential End-User Connection via a 2<sup>nd</sup> fibre strand in the First Termination Point, and such Non-Residential End-User Connection via the 2<sup>nd</sup> fibre strand shall be provided upon the same terms and conditions as the 1<sup>st</sup> fibre strand.

1.2 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 the Non-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 6.12 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, then 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 Non-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, building owners or End-Users or on behalf of the Requesting Licensee, building owners or End-Users;
  - (c) provision or restoration of the Non-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; or
  - (d) where OpenNet needs to obtain or maintain any licence or permission necessary to the provision or restoration of the Non-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 Non-Residential End-User Connection shall always be excluded;

- (e) OpenNet has difficulty accessing to or working in the building or Non-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 Non-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 the Non-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 Non-Residential End-User Connection for the purpose of providing GPON services to the End-User,

OpenNet will provide a licence for Non-Residential End-User Connection of 1:16 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 sixteen (16) Non-Residential Premises (or portion thereof);
- (b) one (1) dedicated fibre strand from the splitter to the First Termination Point of the Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends;
- (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 Non-Residential End-User Connection for the purpose of providing OE services to the End-User, OpenNet will provide a licence for Non-Residential End-User Connection of 1:16 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 thirty two (32) Non-Residential Premises (or portion thereof);
- (b) one (1) dedicated fibre strand from OpenNet's FDF at the Building MDF Room to the First Termination Point of the Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends; and
- (c) where necessary, 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 Non-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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends;
- (c) one (1) Patching Service at OpenNet's FDF in the Building MDF Room;  
and
- (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 elects to use the building owner's in-building cabling within the building and Patching Service, in addition to those already provided in clause 3.1 or 3.2 (as the case may be), is required to connect OpenNet's network to the building owner's in-building cabling, the Requesting Licensee may acquire the additional Patching Service in accordance with Schedule 13 (Patching Service).

3.4 (A) Where the Requesting Licensee requests for Non-Residential End-User Connection of 1:16 Split Ratio for the purpose of providing GPON services to the End-User or Non-Residential End-User Connection of 1:1 Split Ratio, the Requesting Licensee shall access the Non-Residential End-User Connection:

- (a) 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

- (b) at the First Termination Point of the Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise at the FTTB Node of the Non-Residential Premise where OpenNet's network ends.
- 3.4 (B) Where the Requesting Licensee requests for Non-Residential End-User Connection of 1:16 Split Ratio for the purpose of providing OE services to the End-User, the Requesting Licensee shall access the Non-Residential End-User Connection at:
  - (a) OpenNet's FDF at the Central Office designated by OpenNet or the Requesting Licensee's FDF at the Central Office designated by OpenNet;
  - (b) OpenNet's FDF at the Building MDF Room; and
  - (c) the First Termination Point of the Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise at the FTTB Node of the Non-Residential Premise where OpenNet's network ends.
- 3.5 Where the Requesting Licensee wishes to acquire subsequent fibre connection from the Central Office to the Building MDF Room, the Requesting Licensee shall acquire such fibre connection pursuant to Schedule 5 (CO to Building MDF Room Connection).
- 3.6 Where the Requesting Licensee acquires a Non-Residential End-User Connection of 1:16 Split Ratio for the purpose of providing OE services to the End-User, the Requesting Licensee shall ensure the Non-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 Non-Residential End-User Connection (**Request**) to OpenNet on a Business Day in the form of Annex 2A stating, but not limited to the following information:
  - (a) the End-User's name, telephone number and address of the Non-Residential Premise;
  - (b) the Split Ratio required; and
  - (c) whether the Requesting Licensee requires OpenNet to install the in-building enclosure, ducting, cabling and cable tray.

- 4.2 Relocation of the Non-Residential End-User Connection is not allowed. In the event that the Non-Residential End-User has relocated, the Requesting Licensee shall submit a request for termination of the existing Non-Residential End-User Connection and request for a new Non-Residential End-User Connection at the new Non-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 Where the Requesting Licensee has not requested OpenNet to install the in-building enclosure, ducting, cabling and cable tray (under clauses 6.3 and 6.4) at the time it acquires the Non-Residential End-User Connection and wishes to request the installation of the in-building enclosure, ducting, cabling and cable tray at a later date, it may submit a new Request in accordance with clause 4.1. For the avoidance of doubt, the Requesting Licensee would not be liable for premature termination charges (under clause 8.2) for the existing Non-Residential End-User Connection.
- 4.5 OpenNet shall at its sole discretion determine the serving CO and Building MDF Room from which the Non-Residential End-User Connection will be provided.
- 4.6 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. NON-RESIDENTIAL END-USER CONNECTION REQUEST

- 5.1 OpenNet shall process all Requests for Non-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 Non-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 Non-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 ten (10) 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 ten (10) 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 ten (10) 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 Non-Residential End-User Connection is yet to be operational at the point in time of OpenNet's provisioning of the Non-Residential End-User Connection;
  - (d) OpenNet has not rolled out its Network to the Non-Residential 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 Non-Residential End-User Connection pursuant to clause 6.1, OpenNet shall advise the Requesting Licensee within ten (10) Business Days whether the Non-Residential End-User Connection has been successfully set up. In the event that there is insufficient capacity to provide the Non-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 Non-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 Non-Residential End-User Connection.
- 5.7 Where OpenNet rejects the Request for Non-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 Non-Residential End-User Connection by the end of ten (10) Business Days from the receipt of a valid Request from the Requesting Licensee, where OpenNet has deployed its Network to the FTTB Node of the Non-Residential Premise. OpenNet shall use its reasonable endeavours to install the First Termination Point of the Non-Residential Premise, if applicable, during the Requesting Licensee's preferred session.
- 6.2 Where there is insufficient capacity to provide the Non-Residential End-User Connection, OpenNet shall subject to clause 5.2 provide the Non-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 Non-Residential Premise and the First Termination Point of the Non-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 Non-Residential Premise.

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

6.3 Where requested by the Requesting Licensee, OpenNet will install in-building cabling to be terminated at the First Termination Point inside the Requesting Licensee's Non-Residential Premise. However, OpenNet is not liable to provide in-building ducting and cabling due to the following reasons:

- (a) the Non-Residential Building may already have in-building ducting and cabling; or
- (b) building owners may have their own preferences, requirements and constraints for in-building ducting and cabling.

6.4 If the Requesting Licensee requests OpenNet to install the in-building enclosure, ducting, cabling and cable tray, an additional one-time charge as stated in Schedule 15 (Charges) will be applicable.

6.5 Where the owner of a Non-Residential Premise requires the use of deployment technique other than open ducting (for the avoidance of doubt, such deployment shall be provided by a third party), OpenNet shall inform the Requesting Licensee, and both parties shall mutually agree to a revised implementation timeline.

6.6 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 (Patching Service). The Requesting Licensee shall bear the Charges for such work carried out by OpenNet.

- 6.7 Where the Requesting Licensee requests Non-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 Non-Residential End-User Connection.
- 6.8 OpenNet will only 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 Non-Residential End-User Connection.
- 6.9 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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends, to ensure that the Non-Residential End-User Connection falls within the specified optical performance. Testing will be conducted at wavelengths of 1310nm, 1490nm and 1550nm.
- 6.10 OpenNet shall ensure that the optical power loss:
- (a) of any Non-Residential End-User Connection for the purpose of provision of GPON services does not exceed -28dB; and
  - (b) of any Non-Residential End-User Connection for the purpose of provision of OE services does not exceed -20 dB from OpenNet's FDF in the CO 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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends.
- 6.11 OpenNet shall promptly notify the Requesting Licensee upon the completion of the Non-Residential End-User Connection.

- 6.12 Subject to clause 6.13, 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 Non-Residential End-User Connection, subject to a maximum of 30 times the weekly recurring charge for the Non-Residential End-User Connection (**Weekly Recurring Charge**), where:

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

- 6.13 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 End-User to install the required Network to the Non-Residential Premise within the said building;
  - (b) The owner of a Non-Residential Premise 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.

For the avoidance of doubt, where the service activation date has been revised pursuant to any of the circumstances contemplated in this clause 6.13 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.

## **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, Building MDF Room or FTTB Node, the Requesting Licensee shall submit an application for the termination of existing Patching Service and order for a new Patching Service at the Central Office,



Building MDF Room or FTTB Node in accordance with Schedule 13 (Patching Service).

## **8. DEACTIVATION**

- 8.1 Subject to the minimum contract term, the Requesting Licensee may terminate the Non-Residential End-User Connection by giving OpenNet not less than one (1) month prior written notice.
- 8.2 If the Non-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 Non-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 Non-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 Non-Residential End-User Connection is provided.
- 9.2 OpenNet shall be responsible for the maintenance of the Non-Residential End-User Connection, excluding all in-building enclosure, ducting, cabling and cable tray provided by building owner 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 of 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 Non-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 Non-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 Non-Residential End-User Connections, OpenNet will endeavour to carry out the scheduled service interruption between 1am and 6am, 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 the Requesting Licensee to divert its Non-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 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 and the maintenance and availability of in-building enclosure, ducting, cabling and cable tray provided by the building owner.
- 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 Non-Residential End-User Connection (including but not limited to any configuration of the NTE at the Non-Residential Premise);
- (b) co-location at the designated Central Office and Building MDF Room;  
and
- (c) access to the Non-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 Non-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 Non-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 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 Non-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 Non-Residential End-User Connection is deemed to be restored when OpenNet has tested and confirmed to the Requesting Licensee that the Non-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 Non-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 Non-Residential End-User Connection to perform reasonable fault analysis and line testing on the Non-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 Non-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 Non-Residential End-User Connection during a month as described above

Y = Total number of affected Non-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 Non-Residential End-User Connection, subject to a maximum of 30 times the Weekly Recurring Charge for the Non-Residential End-User Connection.

**12. SERVICE LEVEL AVAILABILITY**

12.1 OpenNet shall offer a service level availability of 99.99% per month for the Non-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 Non-Residential End-User Connection is calculated as follows:

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

Where A = 24 hours x number of days for the month (in hours); and

B = total network outage time for the Non-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 Non-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 Non-Residential Premise.

13.2 Each Party shall, so far as reasonably practicable, take all necessary steps to ensure that the licence of the Non-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 Non-Residential End-User Connection shall be twelve (12) months starting from the service activation date of the Non-Residential End-User Connection.

**15. SUSPENSION**

15.1 OpenNet may suspend the Requesting Licensee's licence to the Non-Residential End-User Connection at any time until further notice to the Requesting Licensee if the Non-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 Non-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 Non-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 Non-Residential End-User Connection within six (6) months from the service activation date of the Non-Residential End-User Connection. If the Requesting Licensee fails to do so, OpenNet will deactivate the Non-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 Non-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 Non-Residential End-User Connection under the OpenNet ICO or exempts OpenNet from supplying Non-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 Non-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 Non-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 Non-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 Non-Residential End-User Connection is connected has been terminated or has expired;
- (h) the Non-Residential End-User Connection has become unsafe for its purpose; or
- (i) OpenNet's right to own, maintain or operate the Non-Residential End-User Connection has been revoked or terminated or has expired.

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

- (a) the Requesting Licensee must immediately discontinue the use of the Non-Residential End-User Connection; and
- (b) the Requesting Licensee must without undue delay disconnect all equipment connected to the Non-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, if the termination is the result of OpenNet's fault.

16.6 If the licence of a Non-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 Non-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 Non-Residential End-User Connection.

## 17. REDUNDANCY SERVICE

17.1 The Requesting Licensee may acquire:

- (a) for a Non-Residential End-User Connection of 1:16 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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends;
- (b) for a Non-Residential End-User Connection of 1:16 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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends; or
- (c) for a Non-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 Non-Residential Premise (subject to clauses 6.3 and 6.4) or otherwise to the FTTB Node of the Non-Residential Premise where OpenNet's network ends

**(Redundancy Service)** at the same prices, terms and conditions as the Non-Residential End-User Connection, through a request in the form of Annex 2A, 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 Non-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 Non-Residential End-User Connection.

- 17.3 The Requesting Licensee is eligible to acquire a Redundancy Service for the Non-Residential End-User Connection provided that the Requesting Licensee has acquired or is acquiring an equivalent Non-Residential End-User Connection to the same Non-Residential Premise. The Requesting Licensee may request OpenNet to reject the Request for the Non-Residential End-User Connection in the event that OpenNet is unable to provide the Redundancy Service, but such Requests for the Non-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 2A: REQUEST FORM FOR NON-RESIDENTIAL END-USER CONNECTION**

Request for Non-Residential End-User Connection

Requesting Licensee	Date of Application: _____ Requested Date of Activation: _____ Preferred Installation Session*: AM/PM (if applicable)	Application Reference Number: _____
	Non-Residential End-User Name: _____	Non-Residential End-User Telephone Number: _____
	Non-Residential End-User Address: _____	
	Split Ratio: 1:1 / 1:16  Technology: GPON / OE (only applicable for 1:16 Split Ratio)  In-building wiring to First Termination Point: self provide / request OpenNet to install	
	Any other info: _____ <input type="checkbox"/> Redundancy Service is required <input type="checkbox"/> Request for Non-Residential End-User Connection to be rejected if Redundancy Service is not available	

For and on Behalf of Requesting Licensee

Requesting Licensee	Sign: _____	Company Stamp: _____
	Name: _____	Company Name: _____
	Designation: _____	
	Contact Number, Fax and email address: _____	

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

OpenNet	<input type="checkbox"/> Application accepted: Circuit Identification Number: _____ Tentative Provision Date : _____ Able to provide in-building wiring to First Termination Point (Y/N)
	<input type="checkbox"/> Application rejected Reason for rejection: _____
	OpenNet Name / Signature: _____ Queue Status: _____

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

OpenNet	<input type="checkbox"/> Circuit Provision: Reason: _____ Revised Provision Date (where applicable): _____ Any other reason: _____
	<input type="checkbox"/> Application rejected Reason for rejection: _____
	OpenNet Name / Signature: _____