

SCHEDULE 14

OSS/BSS CONNECTION & PROFESSIONAL SERVICE

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SCHEDULE 14

OSS/BSS CONNECTION & PROFESSIONAL SERVICE

1. GENERAL

1.1 This Schedule sets out the terms and conditions under which OpenNet will provide the Requesting Licensee with OSS/BSS Connection Services (“**OSS/BSS Connection & Professional Service**”) for Requesting Licensee to connect and access to OpenNet Platform. The services also allow Requesting Licensee to integrate and interface its Routers, switches, Firewalls, Servers, etc (“**OSS/BSS Connection Equipment**”) with OpenNet’s OSS/BSS through a set of Open System APIs offered by the OpenNet Platform. The OSS/BSS functions available to the ~~Requesting Licensees~~Requesting Licensee include network coverage check, order management and fault management.

1.2 Except as provided in this Schedule, the Requesting Licensee shall, at its own cost, provide all hardware, software and manpower needed to connect and access to the OpenNet Platform. Where any work or services are to be carried out by OpenNet under this Schedule, and the quantum of the Charge is not defined under Schedule 15 (Charges), the Requesting Licensee must pay all the reasonable costs incurred by OpenNet in provisioning OSS/BSS Connection & Professional Service, subject to the following conditions:

(a) the costs incurred by OpenNet will relate to the work that OpenNet needs to perform in order to provision the OSS/BSS Connection & Professional Services for Requesting Licensee to connect and access to the OpenNet Platform;

(b) before incurring the costs, OpenNet will provide Requesting Licensee with prior reasonable notice that the Requesting Licensee’s request requires OpenNet to undertake such work and such notice shall clearly and with sufficient detail set out the following:

(i) the reasonable costs which OpenNet seeks to recover from the Requesting Licensee; and

(ii) based on the information set out in paragraph (i) above, a binding quote to the Requesting Licensee in respect of the work to be undertaken by OpenNet which shall be valid for a period of ten (10) Business Days (or such other time as may be agreed between the

Parties) from the date they are notified to the Requesting Licensee by OpenNet;

- (c) OpenNet shall obtain the prior approval of the Requesting Licensee to the costs noted in the notice within the time period under paragraph (b)(ii). For the avoidance of doubt, the Requesting Licensee shall not be liable to bear any costs incurred by OpenNet under clause 1.2 unless the Requesting Licensee has given its prior approval under this clause 1.2(c), and OpenNet shall not be obliged to perform any work or service until the Requesting Licensee has agreed to such costs; and
- (d) any dispute in respect of determining the reasonable costs set out in the notice shall be resolved in accordance with Schedule 17 of the ICO Agreement.

1.3 The OpenNet Platform consists of:

- (a) Service Portal with contents and functionalities for ~~Requesting Licensees~~Requesting Licensee to conduct business transactions with OpenNet; and
- (b) System APIs exposed to ~~Requesting Licensees~~Requesting Licensee's systems allowing electronic flow through business transactions.

To facilitate ~~the Requesting Licensees~~Requesting Licensee connecting to the OpenNet Platform, two types of access methods are allowed (at ~~Requesting Licensees~~Requesting Licensee's cost):

- (i) Internet via secure VPN
- (ii) Dedicated Leased Connection

The Internet via secure VPN connection may be disconnected for reasons out of OpenNet's control. For the avoidance of doubt, if the Internet via secure VPN connection or Dedicated Leased Connection is down, the parties shall follow the procedures set out in clause 9 of this Schedule.

1.4 Subject to the Requesting Licensee subscribing to B2B Web Services Interface, the Requesting Licensee shall request from OpenNet the relevant APIs provided that the Requesting Licensee have signed up to the associated schedules of the ICO. If the

Requesting Licensee wishes to obtain a copy of the relevant APIs in relation to the associated schedules of the ICO that it has signed up to, the Requesting Licensee may raise its request to OpenNet in writing and OpenNet shall provide the relevant API documentation within 3 Business Days of such request. The Requesting Licensee shall adhere to all specifications (including APIs) provided by OpenNet.

1.41.5 OpenNet shall not be liable for any claims, damages or liabilities which may arise from OpenNet's provision of the OSS/BSS Connection & Professional Services other than to the extent that it is the result of a ~~grossly~~-negligent, wilful or reckless breach of this Schedule 14 by OpenNet.

2. MODE OF CONNECTION

2.1 OpenNet offers the following modes for connectivity to the OpenNet platform ("**Connection Modes**"):

(a) Service ~~portal~~Portal GUI, via

(i) Public Internet secured VPN Client software; or

(b) B2B Web Services Interface, via

(i) Public Internet secured VPN ; or

(ii) Dedicated Leased Connection (refer to Section II of Annex 14B)

2.2 Clauses 3 and 4 details the steps that the Requesting Licensee -needs to perform to set up connectivity to OpenNet's Platform. If the Requesting Licensee -requestings for Standard Services as set out in clause 4, Requesting Licensee -will need to put in a request for Professional Services as detailed in clause 3(a).

2.3 The following table (which is not exhaustive) lists the forms in the various Annexes that the Requesting Licensee will need to use to request for the Professional Services:

	<u>Mode of Request</u>	<u>Request Forms Required and Sections to indicate</u>
a.	<u>Use of Service Portal GUI</u>	i. <u>Annex 14A-1 Section A.1.</u> ii. <u>Annex 14A-2 as required.</u>
b.	<u>Use of B2B Web Services</u>	i. <u>Annex 14A-1 Section A.2 and Section B.1 (Section B.2 is optional).</u> ii. <u>Annex 14A-2 for B2B user account.</u>
c.	<u>Customisation of Web Services API</u>	i. <u>Annex 14A-1 Section B.3 and Section B.1 Section (Section B.2 is optional).</u> <u>The detailed scope will be covered by the Project Study.</u>

3. STANDARD SERVICES – CONNECTIVITY VIA SERVICE PORTAL

3.1 OpenNet will provide user account(s) and the required password(s) for access to the Service Portal in accordance to the order request in Annex 14A, subject to the Requesting Licensee requesting for connectivity via Service Portal GUI.

3.2 The **OpenNet** Service Portal will provide the standard functionality of Account Management, Network Coverage Check, Order Management and Fault Management. A brief description of the various modules is as follows:

(a) Account management include features like account password change, user account details change, viewing of billing reports.

Through the Service Portal, the Requesting Licensee’s administrator will be able to reset passwords, and manage user information. The Requesting Licensees will also be able to use self-help function to change its own password.

(b) Network coverage check includes features like checking of rollout status (e.g. Homes Passed and Homes Reached), dwelling type, network rollout time schedule.

(c) Order management includes features like order submission, appointment booking, status enquiry and order cancellation.

For ordering of Schedule 1 services, the Requesting Licensee is able to determine if a Residential Premise is covered (Home Passed or Home Reached), as well as schedule installation appointments. The Requesting

Licensee is also able to determine the status of the order as well as Tie Cable information.

(d) Fault management includes features like fault reporting and tracking of resolution process, incident management.

The Requesting Licensees is able to submit Trouble Tickets via the Sservice Portal. The Requesting Licensee is also able to enquire regarding the Trouble Ticket's status and update the Trouble Ticket with Residential End-User appointment times, should the fault rectification involve liaising with the Residential End-User. The Sservice Portal also supports features like cancellation and closing a ticket. Joint investigation with OpenNet may also be initiated via the Service Portal.

3.3 Requesting Licensee shall access the ~~OpenNet~~ Service Portal using the following connection option:

(a) Requesting Licensee shall access the ~~OpenNet~~ Service ~~portal~~Portal GUI via public Internet secured VPN client application. Requesting Licensee shall configure its own firewall settings and allow the VPN connection. Requesting Licensee is required to inform OpenNet of its IP address and port connection setting. Requesting Licensee shall ensure the client setup is according to the specifications indicated in order to be granted the access. For avoidance of doubt, the Requesting Licensee shall provide at its own cost the necessary equipment and facilities such as web browser and Internet connection, and install the VPN client application software provided by OpenNet to connect and access to the ~~OpenNet~~ Service ~~portal~~Portal. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account and connectivity setup for client-based Public Internet secured VPN access as provided in Schedule 15 (Charges).

3.4 Requesting Licensee will not be able to use the same User Account to login to the Service Portal simultaneously.

4. STANDARD SERVICES – CONNECTIVITY VIA B2B WEB SERVICES

4.1 OpenNet will provide the standard functionality of the OSS/BSS interface which includes network coverage check, order management and fault management. A brief description of the various modules can be found in Clause 3.2 above.

4.2 OpenNet will provide consultation for system integration and interfacing to OpenNet's Platform APIs as a value-added service under OSS/BSS Professional Services. The Requesting Licensee must pay the Charge(s) as defined in Schedule 15. For the avoidance of doubt, OpenNet shall be entitled to charge Professional Service Charge and Subject Matter Expert Charge as defined in Schedule 15 for such consultation.

4.3 The Requesting Licensee will be charged for setup, support and use of OpenNet's testing environment upon request, under OSS/BSS Professional Services. Such Charges are defined in Schedule 15. Following completion of the Project Study, OpenNet shall provide the Requesting Licensee with the relevant charges as stated in clause 7.10.

4.4 Requesting Licensee shall connect to OpenNet Platform via host-to-host interface from Requesting Licensee's system to OpenNet Platform to implement flow-through business transactions with OpenNet using the following connection options for open system API:

(a) Requesting Licensee shall connect via the secured VPN. Requesting Licensee is required to inform OpenNet its IP address and port connection settings. Requesting Licensee shall ensure the VPN setup is according to the specifications in Annex 14B in order to be granted the access. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account and connectivity setup for Public Internet secured VPN access as provided in Schedule 15 (Charges).

(b) Requesting Licensee shall connect via Dedicated Leased Connection. Requesting Licensee is required to inform OpenNet its IP address and port connection setting. Requesting Licensee shall ensure the setup is according to the specifications indicated in order to be granted the access. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account, the port required for connection to firewall, and the connectivity setup for Dedicated Leased Connection, as provided in Schedule 15 (Charges).

For the avoidance of doubt, the Requesting Licensee shall indicate in its request whether the connectivity is to its test platform and/or its production platform, and the Requesting Licensee shall only be liable for one set of Charges as provided in Schedule 15 (Charges) if the details of its test and production platform are provided within the same request and reside on the same site.

4.5 Requesting Licensee will not be able to use the same account to interact with OpenNet's APIs simultaneously, and will not be able to use the same account to access the Service Portal.

5. ORDERING AND PROVISIONING PROCEDURE FOR STANDARD SERVICES

5.1 OpenNet shall process all Requests for OSS/BSS Connections on a 'first come, first served' basis.

5.2 The Requesting Licensee shall use either of the Connection Modes specified in Clause 2 to access the functionality and services in the OpenNet Platform.

5.3 OpenNet will be responsible to setup and configure OpenNet's firewall to allow the Requesting Licensee to connect and access to OpenNet Platform using either Internet via secure VPN or Dedicated Leased Connection or both methods.

5.4 Requesting Licensee shall be responsible to liaise with OpenNet to set up and configure its own firewall to facilitate connection and access between its users/systems and the OpenNet platform.

5.5 If Requesting Licensee chooses to set up the Dedicated Leased Connection to OpenNet Platform, the firewall port and the connectivity setup charges as stated in Schedule 15 (Charges)- will be applicable.

5.6 The Requesting Licensee shall provide the transmission link to implement the Dedicated Leased Connection in accordance ~~to~~ with Annex 14B ~~OpenNet's specifications~~ at its own cost.

5.7 To avoid firewall incompatibility and inter-operation issues, the Requesting Licensee shall agree to install and use only firewall and communication software certified by OpenNet or OpenNet appointed supplier(s) to interconnect with OpenNet Platform. Please refer to Annex 14B.

5.8 The Requesting Licensee will appoint a single point of contact ("SPOC") to liaise with OpenNet to provide necessary network information, agree on schedule, resolve interconnection problems, testing, commission and other related activities. The network connectivity tests shall be conducted in accordance with Appendix 1-A.

5.9 The Requesting Licensee shall appoint a user administrator to maintain the Requesting Licensee's user accounts & access rights. The Requesting Licensee

administrator will manage the Requesting Licensee user accounts subscribed by the Requesting Licensee using the administrative functions in the Service Portal by a privileged user for each ~~Requesting Licensees~~Requesting Licensee.

5.10 OpenNet will provide and expose sets of open system APIs for ~~Requesting Licensees~~Requesting Licensee to integrate and interface with OpenNet Platform via B2B web services to support Requesting Licensee's flow-through of business transactions and related operations. OpenNet will support Requesting Licensee to setup and test ~~their~~its system interfaces with the APIs offered by OpenNet Platform pursuant to the terms and conditions of OSS/BSS Professional Services.

5.11 Save for any act or omissions by OpenNet which causes the Requesting Licensees to experience any issues. OpenNet shall not be responsible for any issues that may arise from Requesting Licensee's software which interfaces with OpenNet Platform's open system APIs. Requesting Licensee may request OpenNet to assist in investigating its software problems pursuant to the terms and conditions of OSS/BSS Professional Services, and the man-day(s) effort incurred shall be chargeable as per Project Study fees pursuant to clause 7.12

~~5.11~~5.12 The Requesting Licensee shall submit its ~~OSS/BSS Connection Request~~OSS/BSS Connection Request using the ~~OSS/BSS Connection Request~~OSS/BSS Connection Request Form in the form of Annex 14A containing but not limited to the following information:

- (a) Required mode of Access
- (b) the Requesting Licensee's contact details.
- (c) the services that the Requesting Licensee wishes to undertake.
- (d) any other useful information which the Requesting Licensee believes would be useful to OpenNet in assessing the Requesting Licensee's request.
- (e) Within five (5) Business Days from the ~~Connection Request~~OSS/BSS Connection Request Date, OpenNet will notify Requesting Licensee with a unique reference number (or a similar form of identification in the notification) if its OSS/BSS Connection Request is accepted.

~~5.12~~5.13 Within five (5) Business Days from the ~~Connection Request~~OSS/BSS Connection Request Date, 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 OSS/BSS Connection Request is rejected, for any one of the following reasons:

- (a) the ~~OSS/BSS Connection Request~~ OSS/BSS Connection Request is not in the prescribed form;
- (b) the ~~OSS/BSS Connection Request~~ OSS/BSS Connection Request does not contain the required information or the information provided is inaccurate or misleading;
- (c) the hardware resources are not available ~~or user account limit has been reached~~;
- (d) the provision of the OSS/BSS eConnection will give rise to significant technical or engineering issues;
- (e) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

Where OpenNet rejects the OSS/BSS Connection Request, OpenNet must provide reasons explaining the basis for rejection.

5.14 Where OpenNet is unable to offer the **OSS/BSS Connection** due to unavailability, OpenNet shall take reasonable measures to cater for additional resources where possible. The Requesting Licensee will be informed of the delivery date within three (3) business days of the rejection. ~~Where the user account limit has been reached, Requesting Licensee may take up OSS/BSS Professional Services to provide for additional accounts.~~

5.15 OpenNet will use its best endeavours to assist the Requesting Licensee to set up the OSS/BSS Connection. If the provision of the OSS/BSS Connection will give rise to significant technical or engineering issues, OpenNet shall propose alternative or interim solutions. Furthermore, OpenNet shall periodically update Annex 14B to include relevant information as mentioned in Clause 5.7.

6. VALUE-ADDED SERVICE: OSS/BSS PROFESSIONAL SERVICES (OBPS)

~~6.1 The Requesting Licensee may request some customization to cater to his business requirement. Such customization requests are outside of the standard services offered~~

~~by OpenNet. Requesting Licensee shall provide OpenNet with detailed technical specification of his requirements.~~

~~6.2 The Requesting Licensee may request for customisation of API(s). OpenNet shall evaluate the Requesting Licensee request on a case by case basis pursuant to the terms and conditions of OSS/BSS Professional Services. For the avoidance of doubt, OpenNet shall be entitled to reject the Requesting Licensee's request.~~

~~6.3 OpenNet shall provide customised OSS/BSS Professional Services (**Customised Services**) to the Requesting Licensee to integrate and interface its systems with the OpenNet Platform under this Clause 6. The Customised Services include the following services:~~

~~(a) Setup, support and use of OpenNet's test environment. OpenNet will configure a testing environment for testing the customised interface;~~

~~(b) Consultation for system integration and interfacing using OpenNet Platform APIs.~~

~~(c) Customisation of OpenNet APIs for system integration and interfaces. OpenNet will provide the basic support for the customisation on the interface. OpenNet will provide assistance for troubleshooting on the customised interface in OpenNet Platform~~

6.1 OpenNet shall provide customised OSS/BSS Professional Services ("**Customised Services**") to the Requesting Licensee to help integrate and interface the Requesting Licensee's systems with the OpenNet Platform. The Customised Services shall include the following services:

(a) Setup, support and use of OpenNet's test environment. OpenNet will configure a testing environment for testing the customised interface to support the Requesting Licensee's systems, if it has requested for Standard Services – Connectivity via B2B Web Services.

(b) Consultation for system integration and interfacing using OpenNet Platform APIs.

(c) Customisation of OpenNet APIs for system integration and interfaces. OpenNet will provide the basic support for the customisation on the interface. OpenNet will provide assistance for troubleshooting on the customised

interface in OpenNet Platform. The changes for customisation of OpenNet APIs are subjected to the change management process under clause 14.

~~6.3~~ 6.2 In order to allow the Requesting Licensee to integrate successfully with the OpenNet platform via B2B Web Services, OpenNet has proposed two (2) phases of testing. Phase 1(Handshake Testing) is driven by OpenNet, and covers a suite of test cases for API validation on a-pre-defined data determined by OpenNet. Phase 2 (End to End Testing, which commences after successful testing of Phase 1) is driven by the Requesting Licensees. Requesting Licensees will need to discuss with OpenNet the details of its test cases before commencement of the testing. The Phase 1(Handshake Testing) Tests shall be conducted in accordance with Appendix 1-B.

6.2 OpenNet will also provide consultancy services to advise the Requesting Licensees on how the Requesting Licensee may connect its system to the OpenNet Platform, which will be evaluated on a case-by-case basis via the Project Study.

6.4 The Requesting Licensee may request some customization of API(s) or additional API(s) to cater to their unique business requirements. Such customization requests are outside of the standard services offered by OpenNet. Requesting Licensee shall provide OpenNet with detailed technical specification of its requirements.

6.5 OpenNet shall evaluate the Requesting Licensee's request(s) on a case-by-case via the Project Study. For the avoidance of doubt, OpenNet shall be entitled to reject the Requesting Licensee's request for any services which are not standard services.

~~6.64~~ Where the Requesting Licensee requests to test any new or enhanced system functionalities, OpenNet will setup a platform test environment at Requesting Licensee's costs, which both OpenNet and the Requesting Licensee shall test before they are promoted into the OpenNet and ~~Requesting Licensees~~ Requesting Licensee production environment. This shall be a standard operation procedure to be followed by the Requesting Licensee to minimise the risks of deficient software functions causing disruptions to the NBN supply chain operation.

7. ORDERING OF OSS/BSS PROFESSIONAL SERVICES

~~(a)~~ **Ordering of OBPS**

7.1 The Requesting Licensee shall submit its **OSS/BSS Professional Service Request** using **OSS/BSS Professional Service Request Form** in the form of Annex 14A

including the detail document of **the technical requirement**. The Request Form and technical requirement document must be sent to an email account designated by OpenNet.

7.2 Within five (5) Business Day of the date on which OpenNet receives the OSS/BSS Professional Service Request (“**Service Request Date**”) and subject to clause 5.1 and 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 OSS/BSS Professional Service Request is not in the prescribed form;
- (b) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

7.3 Within fifteen (15) Business Days from the Service Request Date and subject to clause 5.1 and 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 it’s Request is rejected, for any one of the following reasons:

- (a) the Requesting licensee has not taken up the standard services for Connectivity via B2B Web Services;
- (b) the OSS/BSS Professional Service Request and additional requirement does not contain the sufficient information or the information provided is inaccurate or misleading;
- (c) the hardware resources are not available;
- (d) the provision of the OSS/BSS Professional Service will give rise to significant technical or engineering issues;

Where OpenNet is unable to offer the **OSS/BSS Connection** due to hardware unavailability, OpenNet shall take reasonable measures to cater for additional resources where possible. The Requesting Licensee will be informed of the indicative delivery date within three (3) business days of the rejection.

(b) **Project Study**

7.4 OpenNet will provide a Project Study quotation within fifteen (15) Business Days upon receiving the Requesting Licensee's OSS/BSS Professional Service Request, ~~and~~ the associated technical specification and requirement and subject to clause 14.16. A pre-Project Study assessment will be conducted to evaluate the Requesting Licensee's requirements and estimate the lead-time required for the Project Study. OpenNet will provide the Requesting Licensee with the ~~estimated~~ schedule and quote estimated Charges for Project Study, as a result of the pre-Project Study.

7.5 Within fifteen (15) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the pre-Project Study assessment under clause 7.4, the Requesting Licensee shall confirm in writing whether it wishes to proceed with OSS/BSS Professional Service and whether it agrees to pay the ~~estimated~~ Charges for the Project Study.

7.6 Except where OpenNet has rejected an ~~OSS/BSS Connection Request~~ OSS/BSS Connection Request under clauses 7.2 and 7.3, and the Requesting Licensee has chosen to only acquire Service Portal GUI access only, OpenNet will commence on a Project Study. The Requesting Licensee must pay the Project Study Fee specified in the Project Study quotation under 7.4. If the Requesting Licensee does not accept the quotation, or if the Requesting Licensee does not (for any reason whatsoever) inform OpenNet in writing of its acceptance of the quotation within ten (10) Business Days from the date of the quotation, the quotation and the OSS/BSS Connection Request shall be deemed cancelled.

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~~7.6~~ OpenNet shall use its reasonable endeavours to complete the Project Study within the estimated timeframe and charges. If OpenNet's costs increase above OpenNet's estimate set out in the notice under clause 7.5 (as may be varied from time to time under this clause 7.7), OpenNet shall provide the Requesting Licensee with a revised price estimate. OpenNet must obtain the prior approval of the Requesting Licensee to the revised price estimate and if the Requesting Licensee does not provide its approval, then, OpenNet may suspend the Project Study until the Requesting Licensee agrees to the revised price estimate.

~~7.7~~ OpenNet shall inform Requesting Licensee for any changes on the schedule provided and provide the revised schedule.

~~7.8~~ Requesting Licensee will have to agree and endorse on the revised schedule before OpenNet proceeds with further work

~~7.9~~7.7 In the event that the Requesting Licensee cancels the Request before the Project Study is completed, the Requesting Licensee shall be liable to cancellation charges which shall be based on the amount of work done and any other incidental costs and/or expenses which are reasonably incurred by OpenNet in connection with the evaluation of the cancelled Request (to be recovered on a cost-oriented basis).

~~7.10~~7.8 The Project Study will define the project scope of work (“SOW”) including deliverables, acceptance and timeline schedule, assess software, hardware and subject matter expert requirements.

~~7.11~~7.9 OpenNet and the Requesting Licensee shall jointly define the SOW and the terms and conditions (“T&Cs”) which shall include, but not be limited to, the following:

- (a) Key project assumptions.
- (b) OpenNet responsibilities.
- (c) Requesting Licensee responsibilities.
- (d) OpenNet deliverables.
- (e) Acceptance of deliverables.
- (f) Change requests management
- (g) Project schedule
- (h) Payment terms

~~7.12~~7.10 Following completion of the Project Study, OpenNet shall provide the Requesting Licensee with the following information ascertained as a result of the Project Study:

- (a) Scope of Work
- (b) Terms & Conditions
- ~~(b)~~(c) Functional specification of the enhanced interface (where applicable);
- ~~(c)~~(d) Implementation plan;

~~(d)~~(e) the estimated Charges for the OSS/BSS Professional Services (including a breakdown of the major components of the Charges) and an outline of the major elements of the OSS/BSS Professional Services to be undertaken by OpenNet; ~~and~~

~~(e)~~(f) provide an estimation of project man-day(s) required to complete the OSS/BSS Professional Services; and

(g) maintenance and support agreement (where applicable);

OpenNet shall be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges) irrespective of whether the Requesting Licensee proceeds with the OSS/BSS ~~Connection Request~~OSS/BSS Connection Request immediately after completion of the Project Study

8. IMPLEMENTATION OF OSS/BSS PROFESSIONAL SERVICES

8.1 Within fifteen (15) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the Project Study under clause 7.1~~03~~, the Requesting Licensee shall confirm in writing whether it wishes to proceed with OSS/BSS Professional Service and whether it agrees to pay the estimated Charges for the OSS/BSS Professional Services work.

8.2 OpenNet shall use its reasonable endeavours to provide OSS/BSS Professional Services within the estimated charges and timeframe and in accordance to the agreed project SOW and T&Cs.

8.3 OpenNet shall use its reasonable endeavours to complete the OSS/BSS Professional Services Work within the estimated charges. If OpenNet's costs increase above OpenNet's estimate set out in the notice under clause 7.1~~03~~ (as may be varied from time to time under this clause 8.3), OpenNet shall provide the Requesting Licensee with a revised price estimate. OpenNet must obtain the prior approval of the Requesting Licensee to the revised price estimate and if the Requesting Licensee does not provide its approval, then, OpenNet may suspend the OSS/BSS Professional Services Work until the Requesting Licensee agrees to the revised price estimate.

8.4 OpenNet shall complete any implementation within a timeframe stated in the quotation under clause 7.1~~03~~. Subject to delays that may result from suspension of the work under clause 8.3, if OpenNet is not able to complete the work within the

timeframe under this clause 8.4, OpenNet shall inform the Requesting Licensee of when the work will be completed.

~~8.5 OpenNet will assist in conducting the testing with Requesting Licensee according to the agreed schedule.~~

~~8.6 Prior to commencing testing, the Requesting Licensee must submit detailed testing plans and testing timetables no less than fifteen (15) Business Days before commencement of works for OpenNet's approval (or such other time as may be agreed between the Parties). The Requesting Licensee shall not commence testing until it has received OpenNet's approval in writing.~~

~~8.7 Requesting Licensee shall inform OpenNet on the actual date of deployment to production.~~

8.5 Prior to the commencement of testing, the Requesting Licensee must submit a detailed schedule with testing plans, testing timetables and the actual date of deployment to production no less than fifteen (15) Business Days before commencement of works for OpenNet's approval (or such other time as may be agreed between the Parties). The Requesting Licensee shall not commence testing until it has received OpenNet's approval in writing, provided always that OpenNet's approval of the Requesting Licensee's testing plans and timetables shall not be unreasonably withheld.

8.6 OpenNet will assist in conducting the testing with Requesting Licensee according to the agreed schedule.

~~8.8.7~~ Within three (3) Business Days after the completion of the OSS/BSS Professional Services, OpenNet will notify the Requesting Licensee and request the Requesting Licensee for a final acceptance of the OSS/BSS Professional Services.

~~8.98.8~~ Where the Requesting Licensee has ordered OSS/BSS Professional Services as set out in clause 6.1(c). OpenNet will provide the support for OSS/BSS Professional Services for a period of ~~three~~ (3) months from the date of final acceptance.

~~8.108.9~~ In the event that the Requesting Licensee decides to cancel its Request before the work is completed but after its acceptance of the agreement to pay the Professional Service Charge, the Requesting Licensee shall be liable to cancellation charges which shall include the work completed so far and any other incidental costs and/or expenses which are reasonably incurred by OpenNet in connection with the cancelled Request (to be recovered on a cost-oriented basis).

~~8.118.10~~ The Requesting Licensee shall pay for all software, hardware and subject matter experts and any other costs incurred for the project as stated in the project Scope of Work and Terms & Conditions in Clause 7.103.

9. FAULT REPORTING AND CLEARING

9.1 The Requesting Licensee acknowledges that it is technically impracticable to provide fault free access to and use of the OpenNet Platform and OpenNet does not undertake to do so. The Requesting Licensee acknowledges that it may experience, and OpenNet shall not be liable for, disruption to the OpenNet Platform. The Requesting Licensee shall resubmit to OpenNet service requests affected by any system downtime of the OpenNet Platform. Notwithstanding the above, OpenNet shall be liable for disruption to the OpenNet Platform only if such disruption is caused solely by OpenNet or its appointed supplier(s).

~~9.19.2~~ The Requesting Licensee shall call, email or fax to OpenNet to report problem related to OpenNet Platform with details including the Requesting Licensee's name, contact, nature of problems, problem description, application function etc. OpenNet shall respond by issuing an incident reference number to the Requesting Licensee for follow up.

~~9.29.3~~ 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 OSS/BSS Connection Equipment before reporting the fault to OpenNet.

~~9.39.4~~ Upon receipt of a fault report from the Requesting Licensee under clause 9.2, 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.

~~9.49.5~~ If, following investigation, OpenNet determines that the fault is within the OpenNet Platform, OpenNet shall ~~use reasonable efforts to~~ rectify the fault.

~~9.59.6~~ 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).

~~9.69.7~~ 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.

9.8 The OSS/BSS Connection is deemed to be restored when OpenNet has tested and ~~confirmed that the fault has been rectified and the OSS/BSS Connection is working~~has been restored and OpenNet provides written notification to the Requesting Licensee that the OSS/BSS Connection has been restored.

~~9.79.9 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 OSS/BSS 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).~~

~~9.89.10~~ The Requesting Licensee acknowledges that OpenNet may temporarily disconnect the Requesting Licensee's OSS/BSS Connection to perform reasonable fault analysis and line testing on the OSS/BSS 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.

~~9.99.11~~ Each Party shall maintain and store its own records of faults and repairs.

~~9.109.12~~ Where the fault lies within the OpenNet Platform, OpenNet shall evaluate the severity level of the problem reported and respond accordingly. See "Timeframe" section below for response times.

~~9.119.13~~ OpenNet shall resolve the reported problem based on a mutually agreed timeline between OpenNet and the Requesting Licensee.

~~9.129.14~~ In the event the Requesting Licensee and OpenNet connection(s) at the Requesting Licensee's end is faulty, the Requesting Licensee may request OpenNet to setup and configure Express Firewall Setup (for Emergency Public Internet secured VPN access) from its alternative Firewall at different location. Such request shall be subject to following terms and conditions:

- (a) The Requesting Licensee shall pay the Express Firewall Setup charge as stated in Schedule 15 (Charges).
- (b) The Requesting Licensee shall provide its own internet connection from its alternative firewall premises or work site at its own cost.
- (c) The Requesting Licensee shall liaise with OpenNet to set up and configure OpenNet firewall to allow the emergency public Internet secured VPN access from the Requesting Licensee's alternative access sites.
- (d) The Requesting Licensee shall inform and liaise with OpenNet to cease the emergency public Internet secured VPN access when the alternative access to OpenNet Platform is no longer required.

9.15 Save as otherwise provided for in clause 14 of this Schedule 14, OpenNet retains the right to suspend, modify, remove and/or to add to the OpenNet Platform in its sole discretion with immediate effect and without notice and OpenNet will not be liable for any such action.

9.139.16 Access to the OpenNet Platform may be suspended temporarily and without notice in circumstances of system failure, urgent system maintenance for rectification of severe bugs or repair or for reasons beyond the control of OpenNet.

9.149.17 Where the OpenNet Platform is unavailable, OpenNet shall use its reasonable endeavours to notify the Requesting Licensee and accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number. For the avoidance of doubt, OpenNet shall continue to accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number unless otherwise advised by OpenNet. OpenNet will accord a higher priority to requests that are submitted via the OpenNet Platform.

9.18 Service level guarantees are not provided under this Schedule.

9.19 OpenNet shall use its reasonable endeavours to respond to the Request Licensee in respect of the following:

Timeframe	Severity Level	Response Time
	Severity Level 1 – System and users are unable to do production works or critical business processes (in crisis mode).	Immediate.
	Severity Level 2 – A key system function is not usable but the system is able to continue operation.	Within 2 hours.
	Severity Level 3 – A feature or function is faulty but does not seriously impact operation.	Within 24 hours.
	Severity Level 4 – A feature or function having a minor fault (e.g. Cosmetic problems) but does not impact operation or others issues that do not require immediate action.	Within 2 days or as agreed.

10. OTHER TERMS & CONDITIONS

10.1 All new, modified or upgraded Requesting Licensee software system interfaces must be tested in the OpenNet Platform test environment before being promoted to the live production environment. In the event the Requesting Licensee does not comply with such procedure and such untested software system causes any interruption or damage to the OpenNet Platform, the Requesting Licensee shall be liable to pay Professional Services charges for man-day(s) effort incurred to recover system and data to resume normal operation.

10.2 The Requesting Licensee shall, in accordance with clause 14 of this Schedule 14, work with OpenNet to support testing of OpenNet-initiated OpenNet Platform API software changes including but not limited to implementation of new, modified and upgraded API(s).

~~10.2~~

10.3 The OpenNet Platform will be available daily from 8am to 11pm with the exception of fault reporting functionalities, which will be operational 24 hours daily excluding specific scheduled maintenance periods. The daily maintenance of the OpenNet Platform shall be between 11pm and 8am of the next day, unless otherwise agreed.

10.4 For scheduled maintenance activity ~~with duration beyond 24 hours and subject to Clause 9.16 and 10.3~~, OpenNet shall inform the Requesting Licensee at least one (1) month in advance with the date and time of the scheduled maintenance as well as the functions/modules affected.

10.5 OpenNet retains the right to terminate, ~~vary~~ or suspend the Requesting Licensee's named user accounts and take whatever action it considers appropriate should the Requesting Licensee breach any terms of this Schedule or any part of the ICO Agreement.

~~10.6 OpenNet shall use its reasonable endeavours to ensure that the information provided on the OpenNet Platform is correct. However, OpenNet makes no representations or warranties as to the accuracy of the information on the OpenNet Platform and OpenNet shall not be liable to the Requesting Licensee in respect of the information provided on the OpenNet Platform.~~

~~10.7~~10.6 All Charges are for work done by OpenNet on Business Days unless stated otherwise.

11. TERM OF LICENCE

11.1 The term of an OSS/BSS Connection licence granted under this Schedule shall commence on the date of completion of the **OSS/BSS Professional Services** ("**Commencement Date**") and continues for the term of either one (1) year ("**Term**"), or until the earlier occurrence of any of the following events:

- (a) either Party terminates the OSS/BSS Connection Service in accordance with Clause 13 of this Schedule;
- (b) the OpenNet ICO is revoked by the Authority under clause 12.8 of the ICO Agreement; or
- (c) the Authority removes the requirement for OpenNet to provide OSS/BSS Connection Service under the OpenNet ICO or exempts OpenNet from providing OSS/BSS Connection Service under clause 12.9 of the ICO Agreement.

~~11.2 OpenNet shall, three (3) months before the end of the Term, send a first reminder to the Requesting Licensee notifying it of the impending expiry of OSS/BSS Connection Service licence. If the Requesting Licensee does not respond to the first reminder,~~

~~OpenNet shall, two (2) months before the end of the Initial Term, send a second reminder to the Requesting Licensee. If the Requesting Licensee does not respond to the first and second reminders, OpenNet shall, one (1) month before the end of the Initial Term, send a third reminder to the Requesting Licensee. If OpenNet does not receive a response from the Requesting Licensee at least three (3) weeks before the end of the Initial Term that it does not wish to extend the OSS/BSS Connection Service licence, then in this event, the OSS/BSS Connection Service licence shall be deemed to be extended for another term of one (1) year on the same terms and conditions.~~

12. SUSPENSION OF LICENCE

- 12.1 OpenNet may suspend the Requesting Licensee's OSS/BSS Connection Service licence at any time until further notice to the Requesting Licensee if the **OSS/BSS Connection** 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 OpenNet's Network.
- 12.2 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 access to **OSS/BSS Connection** under this clause 12.

13. TERMINATION OF LICENCE

- 13.1 The minimum contract term shall be for one year and automatically renewed yearly ("**Term**"), unless terminated pursuant to the prevailing agreement.
- 13.2 If any of the user accounts is inactive for more than ~~six two (62)~~ months, OpenNet shall be entitled to recover the inactive user account upon giving the Requesting Licensee ten (10) Business Days prior notice, and the Requesting Licensee ~~did~~does not dispute such written notice ~~given~~ by OpenNet.
- 13.3 At any time after the minimum contract term, OpenNet or the Requesting Licensee may terminate the OSS/BSS Connection Service by giving the other party not less than one month prior notice.

- 13.4 If the Requesting Licensee desires to terminate the OSS/BSS Connection Service before the end of a Term, the Requesting Licensee shall (i) give OpenNet at least one (1) month's prior written notice.
- 13.5 OpenNet may terminate the licence of **OSS/BSS Connection** Service at any time with immediate effect by giving notice to the Requesting Licensee if the Requesting Licensee fails to complete the connection of its OSS/BSS platform within thirty (30) Business Days ~~in accordance with~~ in accordance with Clauses 8.5 and 8.6. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet may grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. ~~A-The~~ Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such request must be received prior to the expiry of the aforementioned thirty (30) Business Days period. OpenNet shall respond to the Requesting Licensee's request under this clause ~~9.1~~13.5 within two (2) Business Days from the date of receipt of such request.
- 13.6 Either Party (**Terminating Party**) may terminate the licence of the OSS/BSS Connection Service:
- (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; or
 - (b) 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).
- 13.7 OpenNet may immediately terminate a licence of **OSS/BSS Connection** Service if:
- (a) in OpenNet's reasonable opinion, the Requesting Licensee is using the OSS/BSS Connection Service in contravention of any applicable law, licence, code, regulation or direction and OpenNet has the necessary confirmation from the relevant Governmental Agencies that the Requesting Licensee is in contravention of the applicable law, licence, code, regulation or direction;

- (b) the Requesting Licensee's OSS/BSS Connection Service licence has been suspended pursuant to clause 12.1 of this Schedule, and the Requesting Licensee fails to rectify the fault resulting in the suspension within a period of sixty (60) Calendar Days from the date of suspension;
- (c) the **OSS/BSS Connection** Service is used for a purpose other than for connecting to the OpenNet Platform to order services and report faults;
- (d) the **OSS/BSS Connection** Service has become unsafe or unfit for its purpose due to (but not limited to) creation and/or sending of internet viruses, worms, Trojan horses, ping, flooding, mail bombing, or denial of service attacks; or due to any activities that disrupt the use of or interfere with the ability of others to effectively use the OpenNet Platform; or when the Requesting Licensee's system is found to be behaving abnormally with reference to the results of handshake, e2e test and day to day operations;
- ~~(e) — OpenNet's right to own, maintain or operate the OpenNet Platform is revoked or terminates or expires.~~

13.8 OpenNet may terminate the licence of OSS/BSS Connection Service on five (5) Business Days prior written notice, if the Requesting Licensee removes or abandons its OSS/BSS Connection Service as detected by OpenNet due to inactivity or otherwise, and the Requesting Licensee does not dispute such written notice by OpenNet.

13.9 If a Requesting Licensee's licence of an OSS/BSS Connection Service is to be terminated at any time during the Term because of the closure of an OpenNet OSS/BSS data centre, OpenNet must give the Requesting Licensee prior written notice at least three (3) months before the scheduled closure of such OpenNet OSS/BSS Data Centre. In the event of a closure of such OSS/BSS Data Centre, OpenNet must take reasonable measures to minimise disruptions to the Requesting Licensee in the provision of its services to the RSPs or End Users. The Requesting Licensee shall bear its own costs associated with the closure of the OSS/BSS Data Centre. However, in the event of downtime of the OSS/BSS Connection Service due to system migration or relocation, OpenNet shall give the Requesting Licensee ~~three~~ (3+) months's written notice before such system migration or relocation. In the event that the Requesting Licensee requests assistance from OpenNet within thirty (30) Business Days after receiving a notice under this Clause to provide an alternative solution to the OSS/BSS Data Centre which is being terminated, OpenNet will use its reasonable endeavours in providing such assistance. The Requesting Licensee shall remain solely responsible for making any alternative arrangements as may be

necessary to continue to provide its services to its customers and shall remove its OSS/BSS Connection prior to the closure of the OSS/BSS Data Centre.

13.10 Upon expiry or termination of the licence of OSS/BSS Connection Service:

- (a) the Requesting Licensee must discontinue the use of its OSS/BSS Connection Services and remove its OSS/BSS Connection from OpenNet's OSS/BSS data centre without undue delay;
- (b) OpenNet shall reinstate the OpenNet Platform and recover/reinstate all firewall settings and recover the reasonable cost of such reinstatement (other than the cost of removing the user accounts) from the Requesting Licensee in accordance with the Termination Charge stated in Schedule 15, other than in circumstances where the Requesting Licensee's discontinuation of the use of the OpenNet Platform is a direct result of OpenNet's decommissioning of the OpenNet OSS/BSS data centre under this Schedule 14, or where the termination occurs as a result of OpenNet's fault; and
- (c) the Requesting Licensee shall pay OpenNet the Charges for the OSS/BSS Connection Service for the remainder of the Term of the OSS/BSS Connection Service licence if the termination is the result of the Requesting Licensee's fault

13.11 If the Requesting Licensee fails to discontinue the use of OpenNet Platform and remove its OSS/BSS Connection under Clause 13.10-13.9(a), OpenNet may at its sole discretion remove and/or dispose of the Requesting Licensee's OSS/BSS Connection and reinstate the OSS/BSS Connection to its original condition. The Requesting Licensee shall pay to OpenNet all reasonable costs associated with the work undertaken by OpenNet including the cost of disposing the OSS/BSS Connection. In such event, the Requesting Licensee shall have no claim whatsoever against OpenNet related to or in connection with the work undertaken by OpenNet pursuant to this Clause 13.10.

14. CHANGE MANAGEMENT PROCESS FOR OPENNET PLATFORM APIS

14.1 OpenNet will collate and maintain an OpenNet Platform APIs Change Management Register. Please refer to Annex 14C. The OpenNet Platform API Register will be published on OpenNet's Service Portal.

14.2 Proposed changes (“Industry Affecting Changes”) to the APIs are to be raised to OpenNet by using the Change Proposal Form as per Annex 14D.

14.3 OpenNet will evaluate the validity of the Industry Affecting Changes using the following set of criteria-:

(a) The proposed changes are related to the OpenNet Platform APIs;

(b) The proposed changes are part of the intended purpose of the Platform; and

(c) The proposed changes do not cause a drastic impact to the performance and stability of OpenNet's Platform

14.4 If OpenNet rejects the proposed changes, OpenNet shall provide the reason for rejection to the Requesting Licensee. If OpenNet agrees to study the change by the Requesting Licensee, a unique change request number will be assigned to the Change Proposal and the OpenNet Platform APIs Change Management Register will be updated accordingly.

14.5 The Change Management Review Committee (“Review Committee”) will be formed by industry representatives, Requesting Licensees that have signed on to OpenNet's Schedule 14 of the ICO Agreement and IDA. The Review Committee shall meet every three (3) months to discuss and evaluate change requests. OpenNet will provide secretariat support for the Review Committee and IDA will chair the Review Committee meetings.

14.6 For the avoidance of doubt-, when OpenNet needs to modify the OpenNet Platform APIs, OpenNet will follow the process described in this clause 14, except for emergency cases or exceptional situations where:

(a) OpenNet needs to take immediate actions where the integrity of the OpenNet Platform is at risk;

(b) There are imminent threats to life or property; or

(c) To comply with legal or regulatory obligations.

14.7 All participants at such Review Committee meetings will discuss the objective of the Change Proposals, how the change would affect the Requesting Licensees' Platforms and the OpenNet's Platform, timeframes and cost of implementation, before voting

to determine the action to be taken and determine appropriate implementation timeframes.

14.8 If OpenNet initiates any changes to the existing OpenNet Platform APIs, OpenNet shall bear the costs of such changes and only those changes that are consequently necessary for the Requesting Licensee to continue to provide the Mandated Services in substantially the same manner as before the changes are made to the system.

14.9 If the Requesting Licensee initiates any changes to the existing OpenNet Platform APIs, the Requesting Licensee shall bear the costs of such changes and only those changes that are consequently necessary for OpenNet and/or other affected Requesting Licensees to continue to provide the Mandated Services in substantially the same manner as before the changes are made to the system.

(a) Submission of Change Proposals

14.10 Proposals to change the OpenNet Platform APIs Register may only be submitted by OpenNet or a Requesting Licensee that has signed onto Schedule 14 of the OpenNet ICO Agreement and which has submitted live orders via the B2B Platform. The initiator of the Change Proposal is required to provide the details at the Review Committee meeting.

14.11 These proposals should be submitted using a standard OpenNet Platform APIs Change -Proposal Form as per Annex 14D that sets out:

- (a) Name of the proposer;
- (b) A description of the proposed change(s);
- (c) Justification/reasons for the change(s);
- (d) Preferred schedule for implementing the change(s); and
- (e) Any other relevant information.

14.12 In order to minimize the Review Committee efforts and encourage work efficiency, every reasonable effort should be made to accumulate multiple amendments together into a single Change Proposal, rather than submit multiple separate proposals. Where a Change Proposal is rejected by the Review Committee, the proposing party may resubmit the Change Proposal only after fully responding to the reasons for rejection as given by the Review Committee, and using a new Change Proposal form.

(b) Consideration of Proposed Amendments

14.13 Subject to Clause 1.1, proposed amendments of the OpenNet Platform API Register will be considered by the Review Committee under an agenda item at Review Committee meeting(s).

14.14 OpenNet shall circulate the Change Proposal to all Review Committee members for comment, within three (3) Business Days of its receipt of such Change Proposal, and at least ten (10) Business Days prior to the Review Committee meeting. The Review Committee members will conduct a high level impact assessment based on the Change Proposal. All comments should be submitted to OpenNet at least ten (10) Business Days before the next Review Committee meeting date.

14.15 The high level impact Assessment (to be conducted by each Review Committee member) shall include, but shall not limited to the following:

(a) Evaluation of business benefits for the Change Proposal;

(b) Possible implementation solution(s) within the Review Committee member systems and their impact(s) based on the Change Proposal; and

(c) Provide order of magnitude cost estimate and estimated time for implementation.

(c) Decisions on Proposed Amendments

14.16 The Review Committee should reach a consensus to accept or reject each Change Proposal submitted for consideration. Consensus shall be reached by simple majority. If no consensus can be achieved by Review Committee, the matter shall be referred to the dispute resolution scheme provided in the Main Body of the ICO Agreement.

14.17 Following the Review Committee's acceptance of the Change Proposal, the Project Study will be conducted by OpenNet in consultation with the Requesting Licensee.

14.18 Upon completion of the Project Study, OpenNet will release the tentative delivery schedule to the Review Committee. Within five (5) Business Days (or such other time as may be decided by the Review Committee), the Requesting Licensee shall to notify OpenNet in writing if it cannot meet the implementation schedule. OpenNet, in consultation with the Review Committee, will propose the final implementation schedule. The Requesting Licensee shall support the final implementation schedule accordingly. If no consensus can be reached by the Review Committee, then the matter shall be referred for dispute resolution in accordance with the Main Body of the ICO Agreement.

14.19 The decision (acceptance or rejection) of the Review Committee in respect of each Change Proposal will be documented, and shall set out:

(a) The submitted Change Proposal Form and any supporting information;

(b) A concise summary of the reasons both for and against the proposed change; and

(c) A concise summary describing the final decision of the Review Committee.

(d) Register Update & Version Control

14.20 Upon consensus by the Review Committee and confirmation of the implementation schedule by the Requesting Licensees, OpenNet will request the proposing party to provide an updated version of the OpenNet Platform API Register, based on the current release provided on the OpenNet Platform.

14.21 The proposing party should undertake verification of the updated OpenNet Platform API Register against the Change Proposal prior to implementation. In the event of any error/discrepancy, the proposing party should refer the matter(s) to OpenNet for appropriate action.

14.22 Upon successful verification of the updated OpenNet Platform APIs Register, OpenNet and the proposing party shall implement the updated OpenNet Platform APIs Register in their relevant systems. This step should occur prior to implementation by any other party.

14.23 OpenNet shall implement the revised OpenNet Platform APIs Register, including any necessary testing efforts, within the implementation schedule. OpenNet shall thereafter formally advise the Requesting Licensees that the updated OpenNet Platform APIs Register is available for implementation, and the Requesting Licensees shall implement the revised Register in accordance with the implementation schedule.

ANNEX 14A-1

OSS/BSS CONNECTION & PROFESSIONAL SERVICE

REQUEST FOR OSS/BSS CONNECTION & PROFESSIONAL SERVICE	
Date of Application : _____ Application Reference Number : _____	
<u>ORDERING OF STANDARD SERVICES</u>	
A. _____ Request for OSS/BSS Mode of Access is sought for either or both connection :	
1. OpenNet Service Portal GUI: a. <input type="checkbox"/> Public Internet secured VPN Client Application Connection	
2. B2B Web Services through open system API: a. <input type="checkbox"/> Internet via secure VPN b. <input type="checkbox"/> Dedicated Leased Connection	
<u>ORDERING OF PROFESSIONAL SERVICES</u>	
B. Request for OSS/BSS Professional Services	
1. <input type="checkbox"/> Setup, support and use of OpenNet's test environment	
2. <input type="checkbox"/> Consultation for system integration and interfacing using OpenNet Platform APIs	
3. <input type="checkbox"/> Customisation of OpenNet APIs for system integration and interfaces	
No of Attachment(s) : _____	
Name : _____	Name of Requesting License : _____
Designation : _____	[Company Name]
Contact Number : _____	
Fax Number : _____	Company Stamp: _____
Signature : _____	
OpenNet <input type="checkbox"/> Not Approved	Reason for Rejection : _____
<input type="checkbox"/> Approved	OpenNet Reference Number: _____
OpenNet Sign : _____	Contact Number : _____
Name: _____	Fax Number : _____
OpenNet Endorsement	
Received Date : _____	Queue Status : _____
	Processed Date: _____

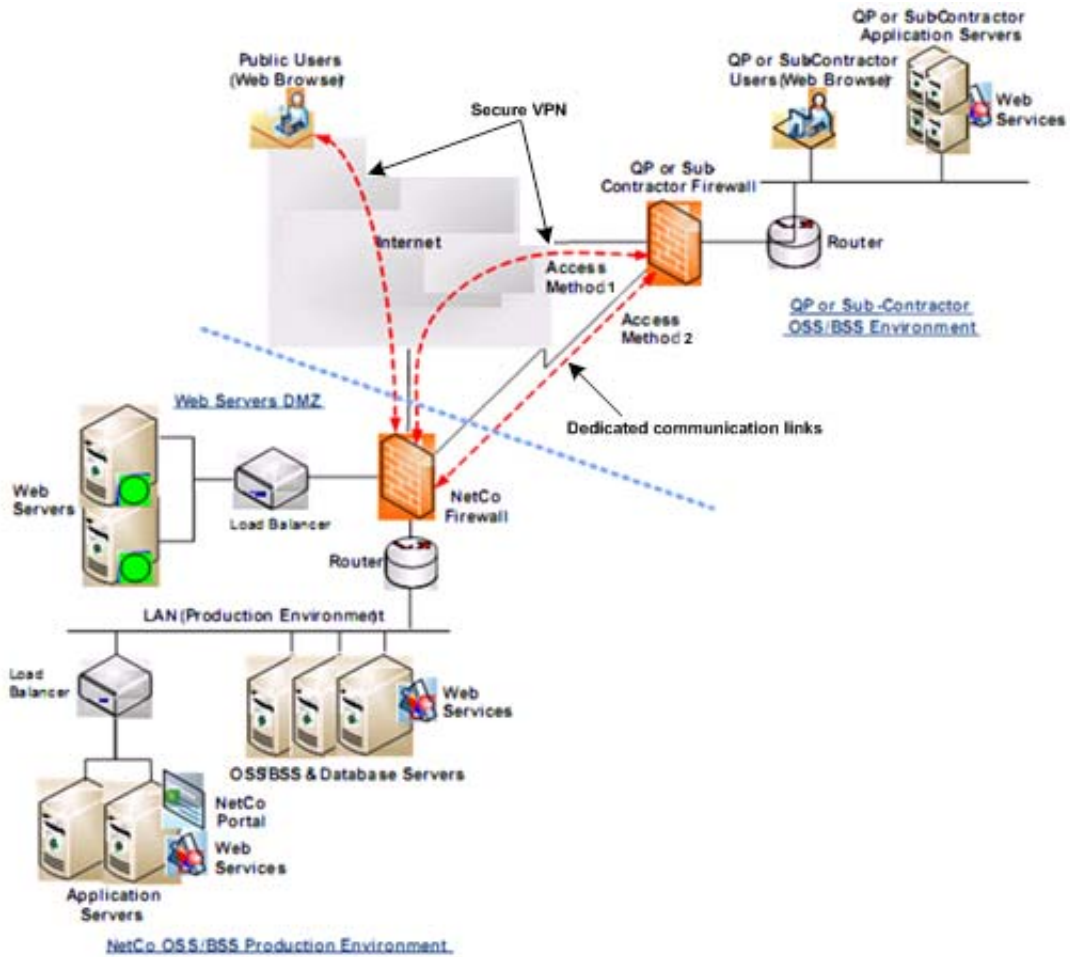
Annex 14A-2

REQUEST FOR USER ACCOUNT	
Date of Application : _____	Application Reference Number : _____
<p>Requesting Licensee Information :</p> <p>(select either one of option)</p> <p>Organisation: _____</p> <p><input type="checkbox"/> 1st New User Account (ICO Registration No: _____)</p> <p><input type="checkbox"/> New User Account <input type="checkbox"/> Change Password <input type="checkbox"/> Remove User Account</p>	
<p>1st User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Name : _____ Name of Requesting License : _____</p> <p>Designation : _____ [Company Name]</p> <p>Contact Number : _____</p> <p>Fax Number : _____ Company Stamp: _____</p> <p>Signature : _____</p>	
<p><input type="checkbox"/> Application returned – incomplete/illegible</p> <p><input type="checkbox"/> Not Approved Reason for Rejection: _____</p> <p><input type="checkbox"/> Approved OpenNet Approval Code: _____</p>	
<p>OpenNet</p> <p>Received Date: _____ Queue Status: _____ Processed Date: _____</p>	
<p>OpenNet Endorsement</p> <p>Name: _____ Signature: _____ Date: _____</p>	

ANNEX 14B

TECHNICAL SPECIFICATIONS

I. CONNECTIVITY DIAGRAM



II. TYPES OF COMMUNICATION LINKS & SPECIFICATIONS

Specification	OpenNet end	NetCo QP end
Type of Links	1) Dedicated, Secured VPN link – preferably fibre optic WAN link	1) Dedicated, Secured VPN link – preferably fibre optic WAN link
	2) Secured VPN via Internet links	2) Secured VPN via Internet links
Bandwidth	10 Mbps or higher	10 Mbps or higher
Physical Connection	RJ45	
Termination Details	Connect to NetCo QP or S/P Firewall	Connect to OpenNet Firewall
Protocol Support at WAN Links	Must Support TCP/IP	Must Support TCP/IP
Security details	Must support VPNs, Support of 3DES, IPSEC , ACL	Must support VPNs, Support of 3DES, IPSEC , ACL
Application Access Control	User authentication, authorisation, access control, OpenNet will govern the web services that could be consumed by segmenting user grouping and access list	User authentication, access control, Audit trail

Table 4: Types of Communication Links and Specifications

III. LIST OF SUPPORTED FIREWALL AND VPN

This firewall supports both IPsec and Secure Socket Layer (SSL) VPN. Below are a list of firewalls which are interoperability with OpenNet's firewall.

- ZyXEL ZyWALL
- SonicWall
- WatchGuard Firebox II
- Netscreen-204
- Microsoft ISA 2004
- Checkpoint NGX
- Linksys BEFVP41
- Cisco PIX
- Juniper SSG
- YAMAHA RTX1200

ANNEX 14C

**OPENNET PLATFORM APIs
CHANGE MANAGEMENT REGISTER (SAMPLE)**

CHANGE REQUEST NUMBER	CHANGE REQUEST DESCRIPTION	DELIVERY RELEASE	RAISED BY
XXX001		Dec 2011	Requesting Licensee

ANNEX 14D
CHANGE MANAGEMENT FORM

OPENNET PLATFORM API REGISTER CHANGE PROPOSAL	
Date of Application : _____	Application Reference Number : _____
Title of Proposed Change:	
Description of Proposed Change:	
Justification/Reason for Change:	
Proposed Change Schedule (ie. requested date of implementation):	
Name : _____	Name of Requesting License : _____
Designation : _____	[Company Name]
Contact Number : _____	
Fax Number : _____	Company Stamp: _____
Signature : _____	
OpenNet <input type="checkbox"/> Not Approved	Reason for Rejection : _____
<input type="checkbox"/> Approved	OpenNet Reference Number: - _____
OpenNet Sign : _____	Contact Number : _____
Name: _____	Fax Number - : _____
OpenNet Endorsement	
Received Date : _____	Queue Status : _____ Processed Date: _____

APPENDIX 1-A NETWORK CONNECTIVITY TESTS

Type of Test	Test Items	Purpose	Acceptance Criteria	Estimated Man Days
Network Connectivity (Mandatory)	Test environment connectivity test	To ensure that the server can reach each other at the assigned IP address and port number.	Network Connection between RL and ON can be established using the ports and services assigned for use.	1 (this is part of Standard Services - Connectivity)
	Production environment connectivity test	To ensure that the server can reach each other at the assigned IP address and port number.	Network Connection between RL and ON can be established using the ports and services assigned for use.	1 (this is part of Standard Services - Connectivity)

APPENDIX 1-B HANDSHAKE TESTING

<u>Type of Test</u>	<u>Test Items</u>	<u>Purpose</u>	<u>Acceptance Criteria</u>	<u>Estimated Man Days</u>
Residential End-User Connection (Mandatory) *Building MDF Room to Residential Premise Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Home Passed ii) Home Reached iii) In Service iv) Not able to provide service	Able to send message and process response as per interface specifications.	5
	Advance Coverage check* * This API is optional	To test that the Requesting Licensee is able to send and process the correct messages for CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test the Requesting Licensee is able to send and process the correct messages for getting appointment timeslots.	Able to send message and process response as per interface specifications.	
	Create new order for Home Passed Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	

Create new order for Home Reached Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.
Cancellation Order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.
Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.
Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders. i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.
Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.

Non-Residential End-User Connection (Mandatory) *Building MDF Room to Non-Residential Premise Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Building Reached ii) Not able to provide service	Able to send message and process response as per interface specifications.	5
	Advanced Coverage check* * This API is optional	To test that the Requesting Licensee is able to send and retrieve CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting appointment timeslots.	Able to send message and process response as per interface specifications.	
	Create new order for Non-Residential Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	
	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	
	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	

	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
NBAP Connection (Mandatory) *CO to NBAP DP Connection, NBAP DP to NBAP TP Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Covered ii) Not able to provide service	Able to send message and process response as per interface specifications.	6
	Quotation Notification/Acceptance	To test that the Requesting Licensee is able to retrieve and accept the quotation provided by OpenNet	Able to send message and process response as per interface specifications.	

Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.
Create new order (GPON, OE)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.
Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.
Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.

	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
CO to CO Connection (Mandatory)	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.	
	Create new order	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	
	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	

	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	
	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
CO to Building MDF Room Connection (Mandatory) *Building MDF Room to FTTB Node Connection, FTTB Node to DP Connection follows a similar suite to this	Advanced Coverage check	To test that the Requesting Licensee is able to send and retrieve CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.	
	Create new order	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	

	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	
	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	
	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
Trouble Ticket (Mandatory)	Update Trouble Ticket	To test that the Requesting Licensee is able to update an open Trouble ticket.	Able to send message and process response as per interface specifications.	3
	Receive Ticket Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing Trouble ticket.	Able to send message and process response as per interface specifications.	

	Close Trouble Ticket	To test that the Requesting Licensee is able to close an open Trouble ticket.	Able to send message and process response as per interface specifications.
	Create Trouble Ticket	To test that the Requesting Licensee is able to create a new Trouble Ticket	Able to send message and process response as per interface specifications.

The number of man-days required are indicative and will be discussed with the Requesting Licensee and shall be reflected in the approved project schedule prior to actual testing. The Requesting Licensee shall only be charged for the actual number of man-days required for completion of the testing.