

IDA's reference: IDA.INTC.05.0011/KK

15 August 2013

OpenNet Pte Ltd
152 Beach Road
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Singapore 189721

Attention: Mr Mark Blake
Chief Executive Officer

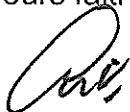
Dear Sirs

**DECISION OF THE INFO-COMMUNICATIONS DEVELOPMENT
AUTHORITY OF SINGAPORE: PUBLIC CONSULTATION ON THE
PROPOSED CO-LOCATION SPACE & SERVICE IN CO-LOCATION ROOM
1 & CO-LOCATION ROOM 2 UNDER OPENNET PTE LTD'S
INTERCONNECTION OFFER**

1. The Info-communications Development Authority of Singapore ("**IDA**"), hereby issues this decision to OpenNet. Unless the context requires otherwise or unless specifically defined herein, all capitalised terms in this decision shall have the same meanings as in OpenNet's Interconnection Offer ("**ICO**") for the provision of services over the Next Generation Nationwide Broadband Network ("**Next Gen NBN**").
2. In order to align the offers of Co-Location Services, OpenNet has submitted a proposed set of terms and conditions, to merge the existing Schedule 12 – Co-Location Service, Schedule 12B – Co-Location Supplementary Cooling Service and Schedule 12C – Co-Location Space & Service in New Co-Location Room into a new proposed Schedule 12 – Co-Location Space & Service in Co-Location Room 1 & Co-Location Room 2 ("**New Schedule 12**"), for IDA's consideration and approval. In addition, OpenNet has proposed a different charge for the Tuas Central Office ("**CO**") from the other COs given the difference in the heat load limit for Tuas CO and the fact that there is currently no demand to align the heat load limit for Tuas CO with the other COs. OpenNet has also provided the associated proposed changes to the Main Body, Schedule 15 (Charges) and Schedule 18 (Dictionary) to the ICO.

3. To ensure that OpenNet's proposed changes are appropriate and meet the needs of the industry, IDA sought feedback from the industry via a public consultation. In the consultation, IDA highlighted that as the proposed New Schedule 12 was modeled closely on Schedule 12C, and given that Schedule 12C had only recently been consulted on and approved, IDA would not require OpenNet to make further changes to the terms and conditions already approved under Schedule 12C unless there were strong justifications to amend those terms. At the close of the consultation, IDA received comments from five (5) respondents (namely, M1 Limited, Nucleus Connect Pte Ltd, Singapore Telecommunications Limited, StarHub Ltd and SuperInternet ACCESS Pte Ltd).
4. IDA has carefully reviewed OpenNet's proposed New Schedule 12 and the comments from the respondents on OpenNet's proposal. IDA notes that the industry disagreed with the application of uniform pricing to Co-Location Room 1 & Co-Location Room 2.
5. Considering that OpenNet's proposed New Schedule 12 will require OpenNet to offer uniform pricing for Co-Location Room 1 & Co-Location Room 2 and yet the industry objected to such a pricing arrangement, IDA will not approve OpenNet's proposed New Schedule 12 in its entirety (the "**Decision**"). Consequently, the associated proposed changes to the Main Body, Schedule 15 (Charges) and Schedule 18 (Dictionary) to the ICO are also not approved. The reasons for this Decision are set out in the accompanying Explanatory Memorandum to this Decision.
6. As such, the terms and conditions of Schedule 12, Schedule 12B and Schedule 12C to OpenNet's ICO will remain the same and no changes will be made to the Main Body and Schedule 18 (Dictionary) to the ICO under this Decision. IDA will separately issue a direction¹ to OpenNet to amend Schedule 15 arising from IDA's completion of the ICO price review. IDA will publish the revised Schedule 15 in due course.
7. If you should require any clarification on the above, please direct your queries to the under-signed via email at IDA_ILO@ida.gov.sg.

Yours faithfully



Aileen Chia (Ms)
Deputy Director-General (Telecoms & Post)

¹ IDA will be publishing its direction to OpenNet in its website upon the issuance of the direction.

EXPLANATORY MEMORANDUM

1. This Explanatory Memorandum explains the Decision dated 15 August 2013, issued by the Info-communications Development Authority of Singapore (“IDA”) to OpenNet Pte Ltd (“OpenNet”), rejecting OpenNet’s proposed New Schedule 12 to its Interconnection Offer (“ICO”) to offer Co-Location Space and Services at the Central Offices (“COs”) to the Requesting Licensees (“RLs”).

2. Unless the context requires otherwise or unless specifically defined herein, all capitalised terms used in this Explanatory Memorandum shall have the same meanings as in OpenNet’s ICO for the provision of services over the Next Generation Nationwide Broadband Network (“Next Gen NBN”).

Background

3. On 23 May 2013, OpenNet submitted a proposed set of terms and conditions, to merge the existing Schedule 12 – Co-Location Service, Schedule 12B – Co-Location Supplementary Cooling Service and Schedule 12C – Co-Location Space & Service in New Co-Location Room into a new proposed Schedule 12 – Co-Location Space & Service in Co-Location Room 1 & Co-Location Room 2 (“New Schedule 12”), to align the offers of Co-Location services, for IDA’s consideration and approval. Under the proposal, OpenNet would offer uniform pricing for Co-Location Services in both Co-Location Room 1 & Co-Location Room 2 for all its COs, except Tuas. OpenNet proposed that the pricing for Co-Location services at Tuas CO would differ from the other COs given the difference in the heat load limit and the fact that there was no demand to align the heat load limit for Tuas CO with that of the other COs. OpenNet also provided the associated proposed changes to the Main Body, Schedule 15 (Charges) and Schedule 18 (Dictionary) to the ICO.

4. To ensure that OpenNet’s proposed changes to the ICO were appropriate and met the needs of the industry, IDA sought feedback from the industry via a public consultation on 27 May 2013. At the close of the consultation on 17 June 2013, IDA received comments from five (5) respondents (namely, M1 Limited, Nucleus Connect Pte Ltd, Singapore Telecommunications Limited, StarHub Ltd and SuperInternet ACCESS Pte Ltd). IDA thanks the respondents for their comments.

5. The respondents have provided comments on OpenNet’s proposal, including comments on the uniform pricing, as well as specific comments on the clauses under the proposed New Schedule 12. As IDA is rejecting OpenNet’s proposed New Schedule 12 in its entirety, it would not be meaningful and IDA will not be commenting on the responses to the specific clauses of the proposed New Schedule 12. IDA will instead focus on the feedback provided on the indicative Co-Location related services charges and the proposed revised power charge computation.

Indicative charges for the proposed New Schedule 12

6. In order to facilitate the industry's consideration of the proposed New Schedule 12, IDA had provided the indicative charges based on IDA's preliminary view, for uniform pricing across all Co-Location Space and Services offered by OpenNet (except Tuas).

Industry's Submission

7. IDA received the following comments from the respondents on the indicative charges for the proposed New Schedule 12:

(a) One respondent commented that OpenNet's proposal must not result in RLs having to pay OpenNet more than what the RLs were currently paying to OpenNet for the existing Co-Location Services, i.e., charges for services under Schedule 12 and Schedule 12B. The respondent added that the proposal to replace the charges under Schedule 12 was a departure from that the charges proposed by OpenNet in its NetCo RFP bid and was not acceptable. The respondent further argued that the ICO was a contractual agreement and as such the prices should not be changed without taking into consideration the commercial impact to RLs, downstream Retail Service Providers ("RSPs") and end-users;

(b) Another respondent submitted that the indicative charges for rack space under the proposed New Schedule 12 were inclusive of both the charges for additional cooling service and monthly recurring charge for space. This differed from the current Schedule 12B where the supplementary cooling service would only be requested as an additional cooling service on top of the basic air conditioning covered in the ICO should the heat load exceed the maximum threshold of 1.5kW; and

(c) The respondents indicated that IDA's primary objective should be to ensure that no RL incurred an increase in the charges paid for Co-Location Space.

IDA's Assessment

8. IDA notes that under OpenNet's proposed New Schedule 12, the existing Schedule 12, Schedule 12B and Schedule 12C would be merged into one schedule for all Co-Location Services provided by OpenNet. The service provided at Co-Location Room 1 & Co-Location Room 2 (except Tuas) would be offered with the same prices, terms and conditions. If OpenNet's proposal were to be adopted, this would mean that the separate charging mechanism

under Co-Location Room 1 (i.e., Schedule 12 and Schedule 12B) would be replaced with the charges under the proposed New Schedule 12

9. This would inevitably result in existing RLs who were in Co-Location Room 1 having to pay charges different from what the RLs were currently paying to OpenNet. In addition, accepting OpenNet's proposal would also require existing RLs who are in Co-Location Room 1 to pay for cooling service even though the RLs' racks may not have exceeded the threshold of 1.5kW. IDA recognises that there may be cost implications to the RLs' downstream RSPs and end users.

10. Nevertheless, IDA would like to highlight that OpenNet's ICO is a regulated offer which IDA may review and change at appropriate junctures to stay responsive to, and to meet, the reasonable needs of the industry and the interest of the public. Without limitation, the review of the prices, terms and conditions of OpenNet's ICO is set out under Sections 10 to 12 of the Code of Practice for Next Gen NBN NetCo Interconnection ("NetCo Code"). As such, RLs (and OpenNet) should expect that the ICO may be amended by IDA from time to time.

11. In addition, IDA also notes that one respondent had claimed that OpenNet's proposal would be a departure from OpenNet's NetCo RFP bid and it was therefore not acceptable. IDA would like to clarify that OpenNet's NetCo RFP bid in relation to Co-Location Services was only to provide a 25-year term for the original Co-Location Space of 120 square metres, i.e., Co-Location Room 1 without supplementary cooling service. In any event, IDA is not aware of any RL who has taken the Co-Location Services from OpenNet under such a 25-year term. Notwithstanding OpenNet's NetCo RFP bid, IDA has full flexibility to take any action pursuant to its regulatory powers without being fettered by the terms and provisions of the NetCo Contract. For instance, IDA had required OpenNet to offer the original Co-Location Space on a 2-year term, in addition to the 25-year term. IDA had further required OpenNet to offer supplementary cooling service when the original Co-Location Space reached a state where the RL's co-located equipment reached a critical level of potentially being over-heated. In addition, when the original Co-Location Space at several OpenNet's COs reached near full utilisation, IDA had also approved OpenNet's Schedule 12C (Co-Location Space & Service in New Co-Location Room) on 20 February 2013 for OpenNet to provide a 2-year term for additional Co-Location Space with supplementary cooling service to meet the industry's need.

12. Having considered the industry's comments, and recognising that, OpenNet's proposed changes are but just one of the plausible arrangement for charging the Co-Location Space in Co-Location Room 1 and Co-Location Room 2, IDA hereby rejects OpenNet's proposed New Schedule 12. OpenNet will thus continue to offer Co-Location Space and Services at the Central Offices in accordance with Schedule 12, Schedule 12B and Schedule 12C to OpenNet's ICO.

IDA determined charges for Schedule 12, Schedule 12B and Schedule 12C

13. Separately, IDA has completed reviewing the proposed charges for Schedule 12C to the ICO and the determined charges shall be:

Schedule	Co-Location Services	S\$ Per Month
12C	Co-Location Space (2 year term)	2,465.24

14. In addition, IDA has also completed the review and modification of the prices under the ICO as provided for under the NetCo Code. For completeness, the determined charges for Schedule 12 and Schedule 12B to the ICO are summarised in the table below:

Schedule	Co-Location Services	Unit	S\$ Per Month
12	Co-Location Space (25 year term)	Per square metre	367.00
12	Co-Location Space (2 year term)	Per square metre	590.19
12B	Co-Location Supplementary Cooling Service (for all COs except Tuas)	Per cooling unit	1,647.38

Power Charge Computation for Co-Location Services

15. OpenNet also proposed that the monthly recurring power charge under the proposed New Schedule 12 be as follows:

A x B x C x D where

A = Circuit breaker size (in Amperes) provided to the RL

B = Supply voltage (in Volts)

C = Customised conversion factor (to be approved by IDA)

D = Prevailing electricity tariff for low tension supplies (\$/kWh) published by Singapore Power on a quarterly basis

For the avoidance of doubt, the supply voltage used for computation of single phase AC and DC shall be 230V and 48V respectively.

Industry's Submission

16. Two industry respondents have provided their suggestions on how the customised conversion factor ("C") should be computed and established. One respondent has further highlighted its concern on the use of the prevailing electricity tariff for low tension supplies used in the power charge computation.

IDA's Assessment

17. IDA has assessed and sees merit in revising the current approach to derive power charges as the proposed approach is more equitable in reflecting the costs of power which Requesting Licensees require for their co-located equipment. Further, IDA notes that the majority of the co-located equipment requires direct current. Details of IDA's assessment are set out below.

18. First, OpenNet's proposed approach reflects the cost differential between supplying the two forms of electric power, namely alternating current and direct current, as opposed to the current approach which averages the costs and results in cross subsidisation from direct current to alternating current.

19. Second, instead of using a pre-determined electricity tariff for the next 3 years, the revised approach will adopt the prevailing electricity tariff for low tension supplies published by SP Services Ltd. Given the uncertainty in the price trend of electricity tariffs, IDA considers that this is a fairer approach to both OpenNet and Requesting Licensees, as it would better avoid any under-recovery by OpenNet or over-payment by Requesting Licensees.

20. Finally, OpenNet's proposed approach to apply a conversion factor, "C", would take into account the fact that a circuit breaker will not be sized to operate at its rated load capacity. While IDA agrees that a factor should be applied, IDA also views that this factor should be no higher than 80% of the circuit breaker's rated load capacity, which is the standard derating factor for a standard circuit breaker.

21. In this regard, IDA has assessed that charging by per fused ampere may no longer be appropriate, given its limitation in reflecting the underlying costs. Therefore, IDA will consider to allow OpenNet's proposed approach to derive power charges but requires OpenNet to propose the rate of the conversion factor, "C", for IDA's consideration and approval. Decision on the power charge computation will be issued as part of the IDA's direction to OpenNet arising from IDA's completion of the ICO price review.