

**Joint Statement of the Communications Authority and  
the Secretary for Commerce and Economic Development**

**Arrangements for the Frequency Spectrum  
in the 2.5/2.6 GHz Band upon Expiry of the  
Existing Assignments for the Provision of Public Mobile Services  
and the Related Spectrum Utilisation Fee**

**1 April 2025**

**PURPOSE**

This Statement promulgates the decision of the Communications Authority (“CA”) on the arrangements for the re-assignment of 50 MHz of spectrum in the frequency range of 2515 – 2540 MHz paired with 2635 – 2660 MHz (“Available Spectrum”) in the 2.5/2.6 GHz band upon expiry of the existing assignments in May 2028 for the provision of public mobile services, as well as the decision of the Secretary for Commerce and Economic Development (“SCED”) on the arrangements for the related spectrum utilisation fee (“SUF”).

**EXECUTIVE SUMMARY**

S1. CA decides to adopt a market-based approach for the re-assignment of the Available Spectrum in the 2.5/2.6 GHz band upon expiry of the existing assignments in May 2028 for the provision of public mobile services.

S2. The Available Spectrum will be divided into five paired frequency blocks with a bandwidth of 2 x 5 MHz each. A spectrum cap of 20 MHz (i.e. 2 x 10 MHz out of a total of 2 x 25 MHz of the Available Spectrum) will be imposed on each bidder in the auction.

S3. The Available Spectrum will be put to auction in the simultaneous multiple round ascending (“SMRA”) auction format. Subject to the minimum pre-qualification requirements and the connected bidder restriction, all interested parties, including incumbent mobile network operators (“MNOs”) and new entrants, may apply for participation in the auction.

S4. The Available Spectrum will be re-assigned for the period from 1 June 2028 to 30 March 2039, i.e. a term of about ten years and ten months, and a new unified carrier licence (“UCL”) with a validity period of 15 years will be issued to each successful bidder to effect the re-assignment of the Available Spectrum. To simplify future administrative and licensing arrangements, as well as to facilitate smooth handover of frequency blocks of the Available Spectrum, the existing assignment of the frequency block A5 (i.e. 2535 – 2540 MHz paired with 2655 – 2660 MHz band) will be administratively extended by 11 days from 21 May 2028 to 31 May 2028, subject to payment of SUF for the use of spectrum during the extended assignment period by the relevant incumbent assignee.

S5. A technology neutral approach will be adopted for the re-assignment of the Available Spectrum. An assignee may use any technology of a widely recognised standard for service provision. Spectrum assignees of the 2.5/2.6 GHz band may submit a joint application for frequency swapping mutually agreeable to them with sound justifications for CA’s consideration starting from the new assignment term of the Available Spectrum on 1 June 2028.

S6. Within the first five years of spectrum re-assignment, each successful bidder of the Available Spectrum will be required to provide a minimum coverage of 90% of population and lodge a performance bond as a guarantee of its compliance with the network and service rollout obligations. If any of the five frequency blocks of the Available Spectrum is acquired by an incumbent spectrum assignee of the 2.5/2.6 GHz band, the assignee may choose to provide network coverage figures demonstrating that its existing network operating in the 2.5/2.6 GHz band has already fulfilled the 90% minimum population coverage requirement in lieu of a performance bond for the frequency block(s).

S7. The SUF of the Available Spectrum will be determined through auction to be held in the fourth quarter of 2025 tentatively. The auction reserve price will be specified by SCED nearer the time of the auction. In terms of the method of payment, spectrum assignees will be given a choice to pay the SUF either by lump sum payment upfront or by annual instalments, with the first instalment equivalent to the lump sum payment divided by 11 to tally with the term of the re-assignment and with subsequent instalments increased every year by 2.5% to reflect the time value of money to the Government. MNOs who acquire the Available Spectrum will benefit from the Inland Revenue (Amendment) (Tax Deductions for Spectrum Utilization Fees) Ordinance 2024 which took effect in January 2024, allowing full tax deductions for the relevant SUF.

## INTRODUCTION

A total of 50 MHz of the Available Spectrum in the 2.5/2.6 GHz band was assigned in May/June 2013 for the provision of public mobile services, with the assignments due to expire in May 2028. The spectrum is currently assigned to four assignees, namely China Mobile Hong Kong Company Limited (“CMHK”), Genius Brand Limited (“GBL”)<sup>1</sup>, Hong Kong Telecommunications (HKT) Limited (“HKT”)<sup>2</sup> and SmarTone Mobile Communications Limited (“SmarTone”), with an amount of 2 x 5 MHz for each of CMHK, GBL and HKT, and of 2 x 10 MHz for SmarTone.

2. CA and SCED jointly issued a consultation paper on 19 September 2024 (“Consultation Paper”)<sup>3</sup> to seek views and comments of the telecommunications industry and other affected persons on the proposed arrangements for the re-assignment of the Available Spectrum upon the expiry of the existing assignments in May 2028, and the methods for setting the related SUF.

3. By the close of the consultation, four submissions from MNOs, namely CMHK, HKT, Hutchison and SmarTone were received. Having carefully considered their views and comments, CA and SCED set out in this Statement their respective decisions on the arrangements for the re-assignment of the Available Spectrum and the related SUF. Salient views and comments of the respondents, as well as the respective responses of CA and SCED, are summarised in the **Annex**.

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<sup>1</sup> GBL is a 50:50 joint venture between HKT and Hutchison Telephone Company Limited (“Hutchison”). The spectrum in the 2.5/2.6 GHz band assigned to GBL is assumed to be divided equally between HKT and Hutchison for the purpose of calculation of the spectrum holding in this Statement.

<sup>2</sup> 2 x 5 MHz of the Available Spectrum was first assigned to CSL Limited in May 2013 following an auction in which HKT did not participate. HKT subsequently acquired CSL Limited after obtaining the prior consent of CA in 2014 pursuant to the then merger and acquisition requirements of section 7P of the Telecommunications Ordinance (Cap. 106) and became an assignee of the Available Spectrum.

<sup>3</sup> The Consultation Paper is available at:  
[https://www.coms-auth.hk/filemanager/en/content\\_711/cp20240919.pdf](https://www.coms-auth.hk/filemanager/en/content_711/cp20240919.pdf) and  
[https://www.cedb.gov.hk/assets/resources/cedb/consultations-and-publications/cp20240919\\_e.pdf](https://www.cedb.gov.hk/assets/resources/cedb/consultations-and-publications/cp20240919_e.pdf).

## LEGISLATIVE AND POLICY FRAMEWORK

4. Under section 32G(1) of the Telecommunications Ordinance (Cap. 106) (“TO”), CA has the statutory duty to promote the efficient allocation and use of the radio spectrum as a public resource of Hong Kong. Sections 32H(2) and 32I(1) of the TO empower CA to allocate and assign radio frequencies and to designate the frequency bands in which the use of them shall be subject to the payment of the SUF following consultation with the telecommunications industry and other affected persons in accordance with section 32G(2) of the TO. Sections 32I(2) of the TO empower SCED to prescribe the method for determining the SUF.

5. Section 4(4) of the Communications Authority Ordinance (Cap. 616) (“CAO”) stipulates that CA, in performing its functions, must have regard to the following as appear to it to be relevant in the circumstances: (a) the fostering of an environment that supports a vibrant communications sector to enhance Hong Kong’s position as a communications hub in the region; (b) the encouragement of innovation and investment in the communications market; (c) the promotion of competition and adoption of best practices in the communications market for the benefit of the industry and consumers; and (d) acting in a manner consistent with the provisions of the Hong Kong Bill of Rights Ordinance (Cap. 383).

6. The Radio Spectrum Policy Framework (“Spectrum Policy Framework”)<sup>4</sup> promulgated by the Government in April 2007 sets out the policy objectives and the guiding principles in spectrum management which CA should take into account in discharging its spectrum management responsibilities under the TO. By a statement issued in April 2007, the former Telecommunications Authority (“TA”) explained that, in exercising his statutory powers under the TO, he would, in addition to all relevant considerations as required by law, give due regard to the Spectrum Policy Framework to the extent that there would be no inconsistency with the objectives and provisions of the TO<sup>5</sup>.

7. The Spectrum Policy Framework makes it clear that there is no legitimate expectation that there will be any right of renewal or right of first refusal (“RFR”) upon the expiry of a spectrum assignment under the TO. The decision whether a new spectrum assignment, with the same or varied radio frequencies, should be given to the spectrum assignee would be made and

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<sup>4</sup> The Spectrum Policy Framework is available at:  
<https://www.cedb.gov.hk/assets/resources/ccib/policies/spectrum.pdf>.

<sup>5</sup> The former TA Statement on the Spectrum Policy Framework is available at:  
[https://www.coms-auth.hk/filemanager/common/policies\\_regulations/ca\\_statements/ta20070424\\_en.pdf](https://www.coms-auth.hk/filemanager/common/policies_regulations/ca_statements/ta20070424_en.pdf).

notified to the spectrum assignee within a reasonable time before the expiry of its spectrum assignment. In considering assignment of spectrum in general, the policy inclination is that a market-based approach will be used in spectrum management wherever CA considers that there are likely to be competing demands from providers of non-Government services for the spectrum, unless there are overriding public policy reasons to do otherwise.

## **CA'S DECISION ON ARRANGEMENTS FOR RE-ASSIGNMENT OF THE AVAILABLE SPECTRUM**

### **Demand for the Available Spectrum**

8. In the Consultation Paper, CA expressed the view that there would likely be competing demands for the Available Spectrum. Since the launch of commercial 5G services in Hong Kong in April 2020, the demand for high performance mobile data connectivity has continued to grow rapidly owing to the extensive use of broadband services in various sectors, particularly for high speed, reliable and data-intensive applications. The per capita monthly mobile data usage reached 30.7 gigabytes as of December 2024, which is over three times of that five years ago in December 2019. This growth trend is expected to continue in view of the development of innovative telecommunications services and applications adopting the fifth generation ("5G") and beyond mobile communications technologies.

9. Whilst the Available Spectrum is currently fully deployed by the spectrum assignees for the provision of the fourth generation ("4G") mobile services using the Long Term Evolution ("LTE") technology, which is a mature mobile broadband technology with widely available network equipment and user devices, the 2.5/2.6 GHz band is also specified by the telecommunications standardisation body, the 3rd Generation Partnership Project ("3GPP"), as one of the frequency bands that can be used for deployment of 5G services based on the New Radio ("NR") technology. Coupled with the technology neutral approach adopted by CA for spectrum management, there is good potential for the Available Spectrum to be refarmed to meet the high demand for mobile broadband service and other innovative applications adopting 5G or beyond.

10. As CA stated in the Consultation Paper, spectrum in the 2.5/2.6 GHz band belongs to the mid-band spectrum within the 1 – 7 GHz range which provides longer range propagation than the high-band spectrum above 7 GHz and wider bandwidth than the low-band spectrum below 1 GHz. As such, the Available Spectrum supports cost effective provision of mobile broadband services in terms of coverage and capacity requirements.

11. In their submissions to the consultation, the respondents either agree or do not dispute that there are likely to be competing demands for the Available Spectrum. Accordingly, **CA maintains its view that there are likely to be competing demands for the Available Spectrum.**

### **Re-assignment of the Available Spectrum by Auction**

12. In accordance with the guiding principle in the Spectrum Policy Framework for the management of spectrum for which there are likely to be competing demands, CA proposed in the Consultation Paper to adopt a market-based approach for the re-assignment of the Available Spectrum upon expiry of the existing assignments in May 2028. In this regard, auction was considered the most appropriate means of market-based approach for the re-assignment since it would allow the fair value of the spectrum to be determined in an open and transparent way and ensure that the successful bidders would be those who would both value the spectrum the most and be expected to put it to the most efficient use during the term of assignment. Auction is also commonly used by both CA and overseas administrations in the assignment of spectrum for providing public mobile services.

13. Whilst the respondents have no adverse comment on the proposal to re-assign the Available Spectrum by way of auction in general, an incumbent assignee of the Available Spectrum, considers that unless an incumbent spectrum assignee has failed to meet its licence conditions, RFR should be offered to the incumbent assignees of the band after the existing assignment term expires. It further considers that this is the only way to ensure customer service continuity and no wastage of past network investment.

14. CA has evaluated the options of adopting a full market-based approach to re-assign the Available Spectrum by way of auction, as proposed in the Consultation Paper, and of offering RFR in respect of the Available Spectrum (or part thereof) to the incumbent assignees, as proposed by an incumbent spectrum assignee, based on the multiple policy objectives of spectrum re-assignment, viz. ensuring customer service continuity, efficient spectrum utilisation, promotion of effective competition, as well as encouragement of investment and promotion of innovative services. CA's assessment is set out in the paragraphs below.

*Ensuring Customer Service Continuity*

15. CA stated in the Consultation Paper that customer service continuity was unlikely to be a concern for the Available Spectrum even if any of the incumbent spectrum assignees failed to acquire any of the Available Spectrum in the re-assignment exercise, as they could still use other spectrum they hold in the 2.5/2.6 GHz band (i.e. in the frequency ranges of 2500 – 2515 MHz paired with 2620 – 2635 MHz and 2540 – 2570 MHz paired with 2660 – 2690 MHz, hereafter referred to as the “Remaining Spectrum”) which would be due to expire on 30 March 2039, and/or their holdings of spectrum in the other frequency bands below 7 GHz to ensure customer service continuity. Given that the Available Spectrum only constitutes a relatively small proportion of the total amount of assigned spectrum in the ranges of 2% to 6% as shown in Table 1 below, the traffic currently carried by the Available Spectrum can be readily absorbed by the Remaining Spectrum as well as other sub-7 GHz spectrum held by the existing assignees. As such, CA does not agree with the view of a respondent that offering RFR is essential to ensure customer service continuity.

**Table 1: Distribution of sub-7 GHz spectrum held by the four MNOs as at 30 March 2027<sup>6</sup>**

	Sub-7 GHz Band		2.5/2.6 GHz Band			
	Total (MHz)	Share	Available Spectrum (MHz)		Remaining Spectrum (MHz)	Total (MHz)
<b>CMHK</b>	<b>439.6</b>	<b>31.1%</b>	10	(2%)	30	<b>40</b>
<b>HKT</b>	<b>414.6</b>	<b>29.3%</b>	10	(2%)	55	<b>65</b>
<b>SmarTone</b>	<b>354.6</b>	<b>25.1%</b>	20	(6%)	0	<b>20</b>
<b>Hutchison</b>	<b>204.6</b>	<b>14.5%</b>	10	(5%)	5	<b>15</b>
<b>Total</b>	<b>1413.4</b>	<b>100%</b>	<b>50</b>	<b>(4%)</b>	<b>90</b>	<b>140</b>

*Efficient Spectrum Utilisation*

16. In the Consultation Paper, CA stated that the re-assignment of the Available Spectrum by a market-based approach would put the spectrum into the hands of those operators and new entrants (if any) which would value it the most and be expected to put it to the most efficient use during the term of the

<sup>6</sup> The spectrum holdings of the four MNOs have taken into account the results of the auctions of spectrum in the 850/900 MHz, 2.3 GHz and 6/7 GHz bands in November 2024.

assignment. It would also provide an opportunity for MNOs to optimise their spectrum holdings, taking into account other mid-band spectrum acquired and having regard to their own commercial and technical considerations. On the other hand, some MNOs might want to acquire more spectrum in the band to enhance their network capacity and transmission speed or to form contiguous blocks of wider bandwidth to attain higher spectral efficiency. CA notes that the submission does not put forth any justification that offering RFR to the incumbent assignees would contribute to promoting efficient spectrum utilisation in the band.

#### *Promotion of Effective Competition*

17. Similarly, there is no elaboration of how effective competition can be promoted from the respondent who advocates offering RFR to the incumbent assignees. CA therefore maintains its view (as set out in the Consultation Paper) that re-assigning the Available Spectrum by a market-based approach will encourage MNOs to value their newly acquired spectrum and make good use of it to improve coverage, data speed and quality of service, thus promoting effective competition that would benefit consumers.

#### *Encouragement of Investment and Promotion of Innovative Services*

18. In the Consultation Paper, CA stated that re-assignment of the spectrum by a market-based approach would encourage investment and promote the introduction of innovative services, as MNOs acquiring additional spectrum would need to invest in the network infrastructure to enable them to deploy the spectrum effectively, and MNOs assigned with a right mix of spectrum through a market-based mechanism would be in a better position to introduce innovative services in the 5G era. CA notes that the submission supporting the offer of RFR to the incumbent assignees of the Available Spectrum fails to illustrate in what way investment can be encouraged and innovative services can be promoted should there be such an offer.

19. Having considered the comments of the respondents, CA has not identified any public policy reason that would override the adoption of a full market-based approach for the re-assignment of the Available Spectrum. Accordingly, **CA decides to maintain its view to re-assign the Available Spectrum by way of auction upon expiry of the existing assignments.**

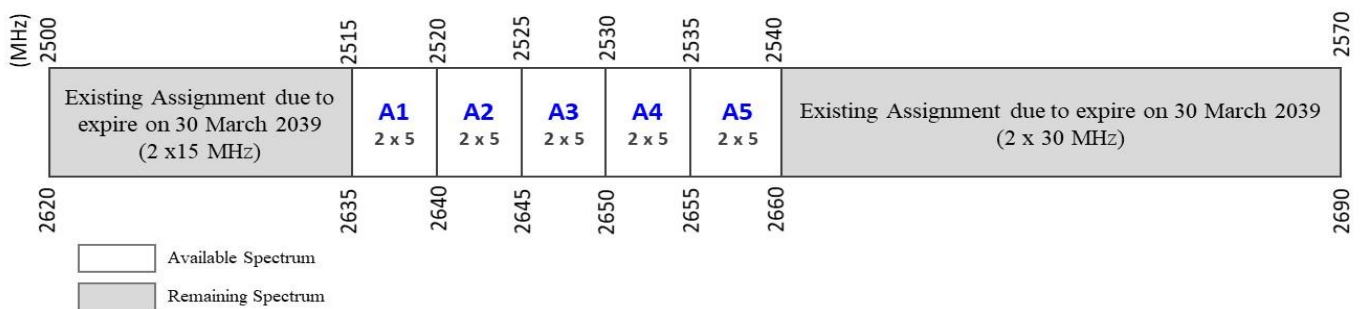


## Band Plan

20. Currently, spectrum in the 2.5/2.6 GHz band is deployed for 4G services based on the Frequency Division Duplex (“FDD”) mode of operation<sup>7</sup> for years in Hong Kong. Although the 2515 – 2675 MHz band in the Mainland has been deployed for 5G services based on the Time Division Duplex (“TDD”) mode of operation<sup>8</sup>, as any change of the mode of operation from FDD to TDD in the 2.5/2.6 GHz band would involve substantial replacement of the existing network equipment and large-scale of engineering work, it is reasonably expected that MNOs are unlikely to invest for change of mode of operation for 4G from FDD to TDD, and hence the FDD mode of operation should continue to be adopted in the whole 2.5/2.6 GHz band.

21. CA proposed in the Consultation Paper to maintain the existing FDD mode of operation, and therefore paired spectrum blocks in the band plan, should continue to be used in the re-assignment of the Available Spectrum and to divide the Available Spectrum into five paired frequency blocks of 2 x 5 MHz each. The respondents generally support or express no adverse comment on the proposed band plan. Thus, **CA decides to maintain its view to divide the Available Spectrum into five frequency blocks with a bandwidth of 2 x 5 MHz each** (the frequency blocks A1 to A5), as depicted in Figure 1 below.

**Figure 1: Band plan for the Available Spectrum in the 2.5/2.6 GHz band**



<sup>7</sup> The FDD mode of operation means that the uplink and downlink communications are separated in the frequency domain via different frequencies.

<sup>8</sup> The TDD mode of operation means that the uplink and downlink communications are separated in the time domain via different time slots using the same frequencies.

## Spectrum Cap

22. Taking into account the overall spectrum holdings of the four MNOs in various frequency bands (excluding spectrum in the 26/28 GHz bands<sup>9</sup>), CA proposed in the Consultation Paper to impose a spectrum cap for each bidder at 2 x 10 MHz out of the total 2 x 25 MHz of the Available Spectrum to be re-assigned.

23. Two respondents support CA's proposal. One respondent, on the other hand, suggests that the spectrum cap should be increased to 2 x 15 MHz so as to foster a more equitable distribution of resources in the 140 MHz of spectrum in the 2.5/2.6 GHz band among MNOs. Another respondent considers no spectrum cap should be imposed unless there is a need to address a clearly identified competition concern, otherwise the imposition of spectrum cap could affect end-customers' mobile service experience, as well as restricting MNOs' achieving economies of scale in using the spectrum with its equipment.

24. The spectrum cap proposed by CA enables MNOs, which provide 4G services with use of the Available Spectrum, to acquire a similar amount of the spectrum they are currently using in the coming re-assignment exercise if they so wish. Furthermore, as mentioned in paragraph 10 above, the Available Spectrum supports cost effective provision of mobile broadband services in terms of coverage and capacity requirements by providing longer range propagation than the high-band spectrum above 7 GHz and wider bandwidth than the low-band spectrum below 1 GHz. The proposed spectrum cap is to ensure that the valuable spectrum will be in the hands of no less than three assignees, which will put the scarce spectrum to the optimal use. This is in line with CA's duty to promote competition in the telecommunications market. On the other hand, such a spectrum cap should not give rise to any competition concern as each of the four MNOs has been assigned with hundreds of megahertz of spectrum across various frequency bands, as shown in Table 2 below. Taking into account the recent results of the spectrum auctions in the 850/900 MHz, 2.3 GHz and 6/7 GHz bands, if the incumbent MNO that holds the largest amount of spectrum succeeds in acquiring up to the cap of 20 MHz of the Available Spectrum, its share in the spectrum available for the provision of public mobile services will only increase slightly from 31.1% to 31.8%, while the shares of spectrum holding by the other MNOs will be in the range of 14.1% to 29.7% after the re-assignment exercise.

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<sup>9</sup> Assessment on spectrum holdings by MNOs does not include spectrum assignments in the 26/28 GHz bands, as this millimetre-wave spectrum is of different radio propagation characteristics and serves different purposes as compared to the low- and mid-band frequencies in the provision of mobile services.

**Table 2: Distribution of sub-7 GHz spectrum by the four MNOs as at 30 March 2027 (MHz)**

	700 MHz	850 MHz	900 MHz	1800 MHz	1.9- 2.2 GHz	2.3 GHz <sup>1</sup>	2.5/ 2.6 GHz <sup>2</sup>	3.3 GHz	3.5 GHz	4.9 GHz	6/7 GHz <sup>1</sup>	Total	Share
<b>CMHK</b>	20		10	40	19.6	50	40	20	60	80	100	<b>439.6</b>	<b>31.1%</b>
<b>HKT</b>	20		20	40	29.6	20	65	30	50	40	100	<b>414.6</b>	<b>29.3%</b>
<b>SmarTone</b>	10	25	10	40	39.6		20	20	50	40	100	<b>354.6</b>	<b>25.1%</b>
<b>Hutchison</b>	20		20	30	29.6	20	15	30	40			<b>204.6</b>	<b>14.5%</b>
<b>Total</b>	70	25	60	150	118.4	90	140	100	200	160	300	<b>1413.4</b>	<b>100%</b>

Note: 1 Distribution of 300 MHz of new spectrum in the 6/7 GHz band is effective on 31 March 2025, while 90 MHz of re-assigned spectrum in the 2.3 GHz band will be effective on 30 March 2027.

2 It is assumed that the spectrum in the 2.5/2.6 GHz band of Genius Brand Limited is split 50:50 between HKT and Hutchison.

25. In view of the above and taking into account the support from some of the respondents, **CA decides to maintain its view to impose a spectrum cap of 2 x 10 MHz on each bidder for the re-assignment of the Available Spectrum.**

### Eligible Bidders

26. Three respondents support CA’s proposal of allowing all interested parties to apply for participation in the auction, whilst one respondent considers that only existing MNOs should be allowed to participate in the auction since the amount of spectrum put up for auction is limited and a new entrant without previous experience in the mobile service market would unlikely make efficient use of the assigned spectrum. It also raises the issue of connected bidder restriction<sup>10</sup>, suggesting that connected bidders should be allowed to participate in the spectrum auction alongside each other as long as the resulting total spectrum acquired by an operator does not exceed the spectrum cap.

27. CA considers that in implementing the market-based approach, all interested parties, be they incumbents or new entrants (provided that they meet the minimal qualification requirements), should be allowed to participate in the auction such that the spectrum will go into the hands of those who value it the

<sup>10</sup> Spectrum auctions in Hong Kong are in general subject to the connected bidder restriction that a bidder must not be a connected bidder in relation to another bidder. A company (“Company A”) is treated as a connected bidder with another company (“Company B”) if –

- (a) Company A holds a material interest (e.g. holding 25% or more of shares) in Company B;
- (b) Company B holds a material interest in Company A; or
- (c) a person holds a material interest in both Company A and Company B.

most and will make the most efficient use of it. Restricting participation in the auction to the incumbent MNOs only will undermine the principle of the market-based approach.

28. The restriction on connected bidders participating in the same spectrum auction, which CA consistently adopted in the past auctions has a vital role to play, not just in safeguarding against any bypass of the spectrum cap, but also in upholding the integrity of the auction by preventing potential collusion among bidders. CA considers that the connected bidder restriction should continue to apply in the auction of the re-assignment of the Available Spectrum.

29. Based on the above considerations, **CA decides that as in all past spectrum auctions, all interested parties may apply to participate in the auction of the Available Spectrum subject to the connected bidder restriction**, provided that they fulfil the following **minimum qualification requirements** –

- (a) lodging of a specified amount of deposit which may be forfeited if the bidder violates the auction rules and/or fails to take up the licence after winning the auction; and
- (b) demonstration of its technical and financial capability to provide services in fulfilment of the licensing obligations to the satisfaction of CA and submit any other relevant supporting information which CA may deem necessary.

### **Auction Format and Timing**

30. CA proposed in the Consultation Paper to adopt the SMRA auction format for the re-assignment of the Available Spectrum. The respondents have no adverse comment on the adoption of the SMRA auction format. In view of the support from respondents, **CA maintains its view that the SMRA auction format will be adopted in the auction for the re-assignment of the Available Spectrum**. CA targets to conduct the auction in the fourth quarter of 2025, and will provide details of the auction in the information memorandum to be issued nearer the time of the auction.

### **Licensing Arrangements**

31. The respondents are in general supportive of the proposed licensing arrangements, except for some comments on the proposed shortened validity period of the frequency assignment, issue of a new UCL with a validity period

of 15 years and restriction of frequency transfer and swap which will be discussed below.

### Licensing and Validity Period

#### *Alignment of the Expiry Date of the Existing Assignments of the Available Spectrum*

32. To simplify future administrative and licensing arrangements, as well as to facilitate smooth handover of frequency blocks of the Available Spectrum, CA proposed in the Consultation Paper to align the expiry date of the existing assignments of the Available Spectrum so that they would all commence on 1 June 2028 on the new assignment term. This will effectively involve an administrative extension of the existing assignment of the frequency block A5 (i.e. 2535 – 2540 MHz paired with 2655 – 2660 MHz band) for HKT by 11 days from 21 May 2028 to 31 May 2028, subject to its agreement and payment of SUF for the use of spectrum during the extended assignment period.

33. SCED proposed in the Consultation Paper that the SUF of the frequency block A5 for the extended period of assignment should equal to the lump sum SUF paid by HKT for the current assignment term of 15 years of the frequency block A5 proportionate to the number of days of the extended period. As such, HKT would be offered the option to pay a SUF of about \$623,000 for the extended assignment period of the frequency block A5.

34. The respondents support or have no adverse comment on the proposal to align the expiry dates of all the five frequency blocks of the Available Spectrum to 31 May 2028, and the proposed amount of SUF of the frequency block A5 for the extended period of assignment. **CA and SCED therefore decide to maintain their respective views that the existing assignment of the frequency block A5 will be extended for HKT by 11 days from 21 May 2028 to 31 May 2028 provided that HKT will pay the SUF of about \$623,000 for the extended period of assignment of the frequency block A5.**

#### *Alignment of the Expiry Date of the New Assignments of the Available Spectrum with that of the Remaining Spectrum*

35. In the Consultation Paper, CA proposed to shorten the assignment period of the Available Spectrum to about ten years and ten months until 30 March 2039, to make it coterminous with the expiry date of the assignment term of the Remaining Spectrum. Three respondents support or indicate no adverse comment on the proposed validity period of about ten years and ten

months for the re-assignment of the Available Spectrum. The remaining respondent, on the other hand, suggests that the standard assignment period of 15 years should be maintained as MNOs have to make substantial investments in infrastructure to effectively utilise the spectrum and a shortened assignment period would create significant uncertainty, which may adversely impact long term investment decisions and the overall development of robust telecommunications networks.

36. The Available Spectrum sits between the upper band and the lower band of the Remaining Spectrum. CA considers that a term of about ten years and ten months for the assignment of the Available Spectrum having the same expiry date of the assignment of the Remaining Spectrum will resolve the existing issue of non-contiguous assignments across the whole 140 MHz of spectrum in the 2.5/2.6 GHz band, thereby avoiding fragmented blocks. This can enhance spectral efficiency of the band and facilitate review on the mode of operation, i.e. FDD or TDD for the whole 2.5/2.6 GHz band. While a respondent considers that a shortened assignment period of spectrum may not favour its long-term investment, CA considers that an assignment period of about ten years and ten months will be reasonably sufficient for long term investment and it is the individual MNO's own commercial decisions whether to participate in an auction for the Available Spectrum that has a shortened assignment period in the upcoming term. Having considered the benefit of a shortened assignment period of the Available Spectrum and the support by the majority of the respondents, CA decides to shorten the assignment term of the Available Spectrum to about ten years and ten months.

37. Regarding CA's proposal of granting of a new UCL with a validity period of 15 years to each successful bidder of the Available Spectrum, three respondents indicate no adverse comment. The remaining respondent, on the other hand, suggests that, given the existing UCLs of the incumbent MNOs already cover the shortened assignment period of the Available Spectrum<sup>11</sup>, the issue of a new UCL with a validity period of 15 years will not be necessary for the incumbent MNOs who acquire spectrum in the upcoming auction, so as to avoid the administrative inconvenience associated with the process normally adopted for the issue of a new licence each time spectrum is assigned to a licensee. Instead, it considers that any spectrum acquired from the auction by the incumbent MNOs can simply be effected by amending their existing UCLs.

38. According to Schedule 3 to the Telecommunications (Carrier Licences) Regulation (Cap. 106V), a fee for the management of any radio frequency assigned shall be payable on the issue of a UCL and on each

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<sup>11</sup> At the time of consultation, the then-existing UCLs of CMHK, HKT, Hutchison, and SmarTone would expire on 31 July 2039 while that of GBL would expire on 30 March 2039.

anniversary of the issue of the UCL remains in force. In other words, CA may not be able to collect spectrum management fee on the date when the spectrum is assigned if a new UCL is not issued. Further, the issue of a new UCL with a validity period of 15 years has been consistently adopted by CA for spectrum assignment or re-assignment exercises.

39. Given the considerations above, **CA decides to maintain its view that the Available Spectrum will be re-assigned for the period from 1 June 2028 to 30 March 2039, i.e. a term of about ten years and ten months, and a new UCL with a validity period of 15 years will be issued to each successful bidder to effect the re-assignment of the Available Spectrum.** For incumbent licensees who successfully acquire spectrum in the auction, they may apply to CA for combining their existing UCLs with the new UCL to be issued.

### Frequency Transfer

40. Due to the connected bidder restriction set out in paragraphs 28 – 29 above, it will not be possible for both HKT and GBL, the incumbent assignees of the Available Spectrum, to participate in the auction. In the Consultation Paper, CA proposed that HKT and Hutchison, as the parent company of GBL, might submit a joint application to CA for its approval for the transfer to GBL of all or part of the Available Spectrum they successfully bid in the auction. Since the sole purpose of the proposed frequency transfer arrangement was to enable GBL to carry on with its existing scale and mode of operation if the connected parties (i.e. GBL, HKT and Hutchison) so wish, CA would only consider a transfer of up to 20 MHz of the re-assigned Available Spectrum<sup>12</sup> that would be equally contributed by HKT and Hutchison (i.e. 10 MHz or one 2 x 5 MHz block of the Available Spectrum by each)<sup>13</sup>. Three respondents support or have no adverse comment on CA's proposal. The remaining respondent, on the other hand, considers that the proposed frequency transfer arrangement is tantamount to granting allowance and flexibility ahead of any formal application from the relevant parties to enhance and facilitate their commercial positions in the coming auction.

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<sup>12</sup> GBL holds 2 x 5 MHz of the Available Spectrum prior to the expiry of the existing assignment on 31 May 2028. The allowable limit for transfer to GBL by HKT and Hutchison of the rights to hold the re-assigned spectrum is set at 2 x 10 MHz in total due to the technical constraint rendered by the paired frequency block of 2 x 5 MHz each and the requirement of an equal amount of transfer by the two parties in order to maintain the existing operation of GBL.

<sup>13</sup> On 9 November 2023, CA approved a joint application, among others, the transfer of an equal amount of spectrum in the 2.5/2.6 GHz band from each of HKT and Hutchison to GBL for the purpose of enabling GBL to carry on with its existing scale and mode of operation after the auction of the Remaining Spectrum in October 2021.

41. CA would like to emphasise that the frequency transfer put forward in the Consultation Paper only enables a possibility for both HKT and GBL to acquire any of the Available Spectrum in the forthcoming auction for continuity of their existing service provision, but does not grant any prior approval to application for transfer to GBL of the Available Spectrum should HKT and Hutchison successfully bid in the auction. It will be up to HKT and Hutchison to decide whether both of them will participate in the upcoming auction as separate entities or jointly through GBL as a single entity. If it is the former, HKT and Hutchison may submit a joint application with justifications to CA for its approval for spectrum transfer to GBL if they so wish. Based on the above considerations and taking into account the support or no adverse comments received by the majority of the respondents, **CA decides to maintain its view that if HKT and Hutchison participate and acquire any of the Available Spectrum in the upcoming auction, they may submit a joint application to CA for its approval for the transfer to GBL of up to 20 MHz of the re-assigned Available Spectrum that is equally contributed by HKT and Hutchison (i.e. 10 MHz or one 2 x 5 MHz block of the Available Spectrum by each) before the date of re-assignment of the Available Spectrum.** Such an arrangement is warranted under the special circumstance as illustrated above and should not be treated generally as a precedent for other spectrum re-assignment exercises.

#### Frequency Swap

42. In the Consultation Paper, CA proposed that, after the auction of the Available Spectrum, spectrum assignees of the 2.5/2.6 GHz band might submit a joint application for frequency swapping mutually agreeable to them with sound justifications for CA's consideration starting from the new assignment term of the Available Spectrum on 1 June 2028. One respondent support CA's proposal on frequency swapping which allows operators to make the most efficient use of their spectrum resources to achieve contiguous frequency bands, thus minimising costs arising from carrier aggregation, and two respondents do not object to CA's proposal. On the other hand, another respondent suggests that any frequency swap application should not be considered until after the expiry of the first five years of the spectrum assignment in order to ensure the realisation of the full market value of the spectrum.

43. CA takes notes that restriction of frequency swap application until after the expiry of the first few years of spectrum assignment will encourage competitive bidding of the spectrum. However, given the Available Spectrum lies between the upper band and the lower band of the Remaining Spectrum, it may not be possible for bidders to acquire contiguous blocks in the whole



140 MHz of spectrum in the 2.5/2.6 GHz band to achieve higher spectral efficiency. As elucidated in the joint statement of CA and SCED issued in March 2021, following the re-assignment of all the spectrum in the 2.5/2.6 GHz band including the Available Spectrum on 1 June 2028, CA may consider any proposal of frequency swapping from MNOs provided that there are sound justifications such as enhancing spectral efficiency<sup>14</sup>. Having considered the above and the support or no adverse comments by the majority of the respondents, **CA decides to maintain its view that spectrum assignees of the 2.5/2.6 GHz band may submit a joint application for frequency swapping mutually agreeable to them with sound justifications for CA’s consideration starting from the new assignment term of the Available Spectrum on 1 June 2028.** Such a frequency swap arrangement starting from the new assignment term of the Available Spectrum is warranted under the special circumstance as illustrated above and should not be treated generally as a precedent for other spectrum assignment exercises.

#### Technology Neutrality

44. In the Consultation Paper, CA proposed to adopt a technology neutral approach whereby spectrum assignees would be free to use whatever technology they would choose based on widely recognised standards for service provision. With no objection to the proposal from the respondents, **CA decides to maintain its position to adhere to the technology neutral approach in assigning and licensing the Available Spectrum.** CA further affirms that to avoid causing any harmful interference among spectrum assignees of the 2.5/2.6 GHz band, the use of the Available Spectrum should be in accordance with the band plans proposed in paragraphs 20 – 21 above, which is based on the FDD mode of operation stipulated in the relevant 3GPP specifications.

#### Network and Service Rollout Obligations

45. In the Consultation Paper, CA proposed to impose network and service rollout obligation on successful bidders of the Available Spectrum in the upcoming auction in order to prevent spectrum hoarding and to ensure that the auctioned spectrum would be put into efficient use for the timely provision of advanced telecommunications services for the benefit of the general public.

46. With no objection from the respondents, **CA decides to maintain its view to require each successful bidder of the Available Spectrum to roll**

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<sup>14</sup> See paragraph 41 of the joint statement of CA and SCED entitled “Arrangements for the Frequency Spectrum in the 2.5/2.6 GHz Band upon Expiry of the Existing Assignments for the Provision of Public Mobile Services and the Related Spectrum Utilisation Fee” issued on 30 March 2021, which is available at: [https://www.coms-auth.hk/filemanager/statement/en/upload/556/2\\_5\\_2\\_6\\_ghz\\_statement.pdf](https://www.coms-auth.hk/filemanager/statement/en/upload/556/2_5_2_6_ghz_statement.pdf).

out its network and services with use of the assigned spectrum to provide a minimum coverage of 90% of the population of Hong Kong within five years from the date of the spectrum re-assignment, as proposed in the Consultation Paper.

#### Performance Bond for Rollout Obligations

47. In the Consultation Paper, CA proposed to require each of the successful bidders of the Available Spectrum to lodge a performance bond to guarantee compliance with the network and service rollout obligations. CA also proposed that in the circumstances where an incumbent assignee of spectrum in the 2.5/2.6 GHz band successfully acquired the Available Spectrum, it might choose to provide network coverage figures demonstrating that its existing network operating in the 2.5/2.6 GHz band had already fulfilled the 90% minimum population coverage requirement in lieu of a performance bond for the frequency block(s).

48. With no objection from the respondents, **CA decides to maintain its view to require each of the successful bidders of the Available Spectrum to lodge a performance bond to guarantee compliance with the network and service rollout obligations** as mentioned in paragraph 46 above. If any of the five frequency blocks of the Available Spectrum is acquired by an incumbent assignee in the 2.5/2.6 GHz band, the **assignee may choose to provide network coverage figures demonstrating that its existing network operating in the 2.5/2.6 GHz band has already fulfilled the 90% minimum population coverage requirement, without the need to provide a performance bond for the frequency block(s).** CA will specify the amount of the performance bond and details of the performance bond requirements in the information memorandum to be issued for the auction of the Available Spectrum.

### **THE DECISION OF SCED ON THE RELATED SPECTRUM UTILISATION FEE**

#### **Level of the SUF**

49. Given that radio spectrum is a scarce public resource, it is incumbent upon the Government to ensure that the SUF of spectrum is set to reflect as closely as possible its full market value so that spectrum assignees, which run their commercial operation in a fully liberalised market, would put the spectrum so acquired to its most efficient use.

50. In paragraphs 11 and 19 above, CA concludes that there are likely to be competing demands and that auction as a market-based approach should be used for the re-assignment of the Available Spectrum. The SUF would therefore naturally be determined through auction whereby the bidders would determine the level of their bids based on clear information on the supply of spectrum and their assessment of the business potential and opportunities. The auction results would reflect the full market value of the spectrum. **SCED decides to prescribe that the SUF of the Available Spectrum will be determined by auction in accordance with section 32I(2) of the TO, with the auction reserve price to be specified nearer the time of the auction.**

51. Noting the prevailing global and local economic and investment environment, as well as the objective to continue encouraging the promotion of development of 5G and beyond, SCED does not intend to set the auction reserve price at a high level which might discourage competition and bidders' eagerness to participate in the auction. Rather, SCED considers that the reserve price for each of the five frequency blocks should be set taking into account the shortened assignment period of the Available Spectrum as decided by CA in paragraph 39 above and at a level that represents the minimum base value of the spectrum for the purpose of kick-starting the competitive bidding process, while balancing the need to forestall non-serious bidders. This coincides with the MNOs' views received from the consultation that the auction reserve price should not be set at a high level.

52. Following the passage of Inland Revenue (Amendment) (Tax Deductions for Spectrum Utilization Fees) Ordinance 2024 in January 2024, the Government successfully implemented the proposal in the 2023-24 Budget to provide greater incentives for MNOs to invest in mobile communications services. The SUF payable by MNOs for the radio spectrum to be acquired in the upcoming auction of 2.5/2.6 GHz band is to be fully deductible, and the tax deduction will be spread over the spectrum assignment term.

### **Method of Payment**

53. To allow for greater flexibility for spectrum assignees to make financial arrangement for the payment of the SUF having regard to their individual circumstances, SCED proposed in the Consultation Paper that spectrum assignees would be given a choice to pay the SUF either by lump sum payment upfront or annual instalments.

54. As all MNOs welcome the flexibility to choose between two payment options as aforementioned, **SCED decides to propose a regulation under section 32I(2) of the TO to prescribe that all spectrum assignees**

(which may include the MNOs and new entrants into the market) **will be given a choice to pay the SUF either by –**

- (a) lump sum payment upfront, which is the lump sum amount determined in auction; or**
- (b) annual instalments, with the first instalment equivalent to the lump sum amount obtained in (a) above divided by 11 (i.e. the number of years of assignment rounded up to the nearest year), and subsequent instalments increased every year by 2.5%, the latest medium-range underlying inflation forecast, to reflect the time value of money to the Government.**

## **IMPLEMENTATION OF THE ARRANGEMENTS FOR SPECTRUM RE-ASSIGNMENT**

55. CA and SCED will make the necessary arrangements to enable the re-assignment of the Available Spectrum to proceed as per their respective decisions in this Statement, including the necessary legislative amendments. Subject to the completion of the legislative process, CA targets to conduct an auction for the Available Spectrum in the fourth quarter of 2025.

56. For the avoidance of doubt, nothing in this Statement will affect, limit or prejudice the exercise of the powers of CA and SCED under CAO, TO or any other relevant legislation.

**Communications Authority  
Secretary for Commerce and Economic Development  
1 April 2025**

**Summary of Submissions to the Consultation Paper  
and the Responses of the  
Communications Authority and  
the Secretary for Commerce and Economic Development**

## INTRODUCTION

On 19 September 2024, the Communications Authority (“CA”) and the Secretary for Commerce and Economic Development (“SCED”) jointly issued a consultation paper to seek views and comments of the industry and other affected persons on the proposed arrangements for the re-assignment of 50 MHz of spectrum in the frequency ranges of 2515 – 2540 MHz paired with 2635 – 2660 MHz (“Available Spectrum”)<sup>1</sup> in the 2.5/2.6 GHz band upon expiry of the existing assignments in May 2028 for the provision of public mobile services and the related spectrum utilisation fee (“SUF”) (“Consultation Paper”)<sup>2</sup>.

2. At the close of the public consultation on 31 October 2024, four submissions were received from the following four mobile network operators (“MNOs”) (listed in alphabetical order) –

- (a) China Mobile Hong Kong Company Limited (“CMHK”);
- (b) Hong Kong Telecommunications (HKT) Limited (“HKT”);
- (c) Hutchison Telephone Company Limited (“Hutchison”); and
- (d) SmarTone Mobile Communications Limited (“SmarTone”).

3. CA and SCED set out in this Annex their respective responses to the views and comments received in the public consultation. CA and SCED have taken into account and given thorough consideration to all the submissions which are relevant to the arrangements for the re-assignment of the Available Spectrum for the provision of public mobile services and the related SUF, though, for practical reasons, not all of the issues raised are specifically mentioned or addressed herein. Please refer to the Statement to which this

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<sup>1</sup> Another 90 MHz of frequency spectrum in the 2.5/2.6 GHz band (i.e. in the frequency ranges of 2500 – 2515 MHz paired with 2620 – 2635 MHz and 2540 – 2570 MHz paired with 2660 – 2690 MHz, hereafter referred to as the “Remaining Spectrum”) was re-assigned on 31 March 2024 and are due to expire on 30 March 2039.

<sup>2</sup> The Consultation Paper is available at: [https://www.coms-auth.hk/filemanager/en/content\\_711/cp20240919.pdf](https://www.coms-auth.hk/filemanager/en/content_711/cp20240919.pdf) and [https://www.cedb.gov.hk/assets/resources/cedb/consultations-and-publications/cp20240919\\_e.pdf](https://www.cedb.gov.hk/assets/resources/cedb/consultations-and-publications/cp20240919_e.pdf).

Annex is attached for the respective decisions made by CA and SCED after the public consultation on the matter.

4. The responses set out in this Annex are without prejudice to the exercise of the powers by CA or SCED under the Communications Authority Ordinance (Cap. 616), the Telecommunications Ordinance (Cap. 106) (“TO”) or any other relevant legislation.

## **ARRANGEMENTS FOR RE-ASSIGNMENT OF THE AVAILABLE SPECTRUM**

### **Re-assignment of the Available Spectrum by Auction**

5. After giving due regard to the Radio Spectrum Policy Framework (“Spectrum Policy Framework”)<sup>3</sup> and considering that there would likely be competing demands for the Available Spectrum, CA proposed in the Consultation Paper to re-assign the Available Spectrum for the provision of public mobile services by way of auction.

***Question 1: Do you agree with the use of a market-based approach by way of auction for re-assignment of the Available Spectrum pursuant to the Spectrum Policy Framework?***

### Views and Comments of the Respondents

6. Whilst the four respondents have no adverse comment on the proposal to re-assign the Available Spectrum by way of auction in general, HKT, who is one of the incumbent assignees of the Available Spectrum, considers that right of first refusal (“RFR”) should be offered to the incumbent spectrum assignees after the expiry of the existing assignments to ensure customer service continuity and no wastage of past network investment, unless they have failed to fulfil their licence conditions.

### Responses of CA

7. According to the Spectrum Policy Framework, the policy inclination is that a market-based approach will be used in spectrum management wherever CA considers that there are likely to be competing demands for the spectrum from providers of non-Government services, unless

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<sup>3</sup> The Spectrum Policy Framework is available at:  
<https://www.cedb.gov.hk/assets/resources/ccib/policies/spectrum.pdf>.

there are overriding public policy reasons to do otherwise. The Spectrum Policy Framework also makes it clear that there is no legitimate expectation that there will be any right of renewal or RFR upon the expiry of a spectrum assignment under the TO.

8. On the basis of the guiding principles of spectrum management set out in the Spectrum Policy Framework, CA has assessed the market demands as elaborated in paragraphs 8 – 11 of the Statement, and concludes that there are likely to be competing demands for the Available Spectrum. Accordingly, a market-based approach should be adopted for the re-assignment of the spectrum unless there are overriding policy reasons to do otherwise. While HKT suggests that RFR should be offered to the incumbent assignees of the Available Spectrum in order to ensure customer service continuity and no wastage of past network investment, it has only made a general claim without providing any substantive arguments or analysis to support that, in the absence of the offer of RFR, customer service continuity would be affected as claimed. In contrast, CA has fully elaborated in paragraph 15 of the Statement why it considers that there should not be concerns about continuity of customer services upon the re-assignment of the Available Spectrum by way of auction. Taking into consideration the multiple policy objectives for spectrum re-assignment, viz. ensuring customer service continuity, efficient spectrum utilisation, promotion of effective competition, as well as encouragement of investment and promotion of innovative services, as discussed in paragraphs 15 – 19 of the Statement, CA is of the view that there is no overriding public policy reason justifying deviation from a market-based approach for the re-assignment of the Available Spectrum.

## **Band Plan**

***Question 2: Do you have any views on the proposal that the Available Spectrum be divided into five paired frequency blocks with a bandwidth of 2 x 5 MHz each?***

### Views and Comments of the Respondents

9. All the four respondents agree to CA's proposed band plan for the Available Spectrum.

### Responses of CA

10. With the support from all the respondents and as explained in paragraphs 20 – 21 of the Statement, CA maintains its view to divide the

Available Spectrum into five paired frequency blocks with a bandwidth of 2 x 5 MHz each.

## **Spectrum Cap**

***Question 3: Do you have any views on the proposed spectrum cap of 2 x 10 MHz to be imposed on each bidder for the re-assignment of the Available Spectrum?***

### Views and Comments of the Respondents

11. CMHK and Hutchison support the proposal of imposing a spectrum cap of 2 x 10 MHz on each bidder for the re-assignment of the Available Spectrum. On the other hand, SmarTone suggests that the spectrum cap should be increased to 2 x 15 MHz to foster a more equitable distribution of spectrum resources among MNOs. HKT considers no spectrum cap should be imposed unless there is a need to address a clearly identified competition concern, otherwise the imposition of spectrum cap could affect end-customer's mobile service experience, as well as restricting MNOs' achieving economies of scale in using the spectrum with its equipment. HKT also considers that if a spectrum cap is imposed, it is unreasonable for the same cap to apply to all MNOs regardless of number of customers, and CA should impose spectrum cap after evaluating customer-to-spectrum ratio and relative market share of each MNO.

### Responses of CA

12. CA considers that the proposed spectrum cap of 2 x 10 MHz enables the incumbent MNOs to acquire in the upcoming auction similar amount of spectrum they are currently using for the provision of 4G services. This will also ensure that the valuable spectrum will be in the hands of no less than three assignees, which will put the scarce spectrum resources to the optimal use and promote competition in the market. On the other hand, CA sees no justifiable reason to adopt different spectrum cap for different MNOs based on their individual's market share, etc. as advocated by HKT as this proposal is unfair to MNOs who have relatively small customer base. A single spectrum cap imposed on each bidder has been consistently adopted by CA previously for spectrum assignment or re-assignment exercises and has a vital role to play in addressing the concern on undue concentration of spectrum holding. Taking into account the submissions received and the reasons given in paragraphs 24 – 25 of the Statement, CA considers it appropriate to maintain its proposal to



impose a spectrum cap of 2 x 10 MHz on each bidder for the re-assignment of the Available Spectrum.

## **Eligible bidders**

***Question 4: Do you have any views on re-assigning the Available Spectrum by allowing all interested parties to apply for participation in the auction, subject to the minimum qualification requirements and the connected bidder restriction?***

### Views and Comments of the Respondents

13. CMHK, Hutchison and SmarTone support CA's proposal that all interested parties are allowed to participate in the auction for the re-assignment of the Available Spectrum. On the other hand, HKT considers that only existing MNOs should be allowed to participate in the auction, as the amount of spectrum put up for auction is limited and a new entrant without previous experience in the mobile service market would unlikely make efficient use of the assigned spectrum, citing the example of the current inefficient use of spectrum in the 2.3 GHz band for fixed wireless services by a new entrant.

14. HKT also raises the issue of connected bidders<sup>4</sup>, suggesting that connected bidders should be allowed to participate in the spectrum auction alongside each other as long as the resulting total spectrum acquired by an operator amounts to 20 MHz or less, i.e. not exceeding CA's proposed spectrum cap.

### Responses of CA

15. As regards the current inefficient use of the spectrum in the 2.3 GHz band for fixed wireless services by an MNO commented by HKT, CA has already addressed this issue by restricting the scope of service of the band to the provision of public mobile services in the next assignment term<sup>5</sup>. CA considers that it is not appropriate to limit participation in the auction of the

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<sup>4</sup> Spectrum auctions in Hong Kong are in general subject to the connected bidder restriction that a bidder must not be a connected bidder in relation to another bidder. A company ("Company A") is treated as a connected bidder with another company ("Company B") if -

- (a) Company A holds a material interest (e.g. holding 25% or more of shares) in Company B;
- (b) Company B holds a material interest in Company A; or
- (c) a person holds a material interest in both Company A and Company B.

<sup>5</sup> See paragraph 20 of the Annex to the joint statement of CA and SCED entitled "Arrangements for the Frequency Spectrum in the 850/900 MHz and 2.3 GHz Bands upon Expiry of the Existing Assignments for the Provision of Public Mobile Services and the Related SUF" issued on 2 May 2023, which is available at: [https://www.coms-auth.hk/filemanager/statement/en/upload/621/joint\\_statement\\_20230502.pdf](https://www.coms-auth.hk/filemanager/statement/en/upload/621/joint_statement_20230502.pdf).

Available Spectrum to the existing MNOs as proposed by HKT as this will compromise the principle of the market-based approach. As elaborated in paragraph 27 of the Statement, all interested parties, be they incumbents or new entrants, should be allowed to participate in the auction such that the spectrum will go into the hands of those who value it the most and hence can be expected to make the most efficient use of it.

16. As regards the connected bidder restriction, it has been consistently adopted in the past auctions and has a vital role to play in upholding the integrity of the auction by preventing potential collusion among bidders.

17. In view of the above, CA maintains its views that all interested parties, be they incumbents or new entrants, should be allowed to apply for participation in the auction, subject to their meeting the minimal qualification requirements as stated in paragraph 29 in the Statement. CA also considers that the connected bidder restriction should continue to apply in the auction of the Available Spectrum.

## **Auction Format**

***Question 5: Do you have any views on the adoption of the simultaneous multiple round ascending (“SMRA”) auction format for the re-assignment of the Available Spectrum?***

### Views and Comments of the Respondents

18. All the four respondents have no adverse comment on the adoption of the SMRA auction format for the re-assignment of the Available Spectrum.

### Responses of CA

19. With the support from all the respondents and as explained in paragraph 30 of the Statement, CA maintains its view to adopt the SMRA auction format for the re-assignment of the Available Spectrum.

## **LICENSING ARRANGEMENT**

### **Licensing and Validity Period**

***Question 6: Do you agree with the proposed arrangements for the alignment of the expiry date of the existing assignments of the Available***

***Spectrum and the payment of SUF for the extended period of assignment of the frequency block A5?***

Views and Comments of the Respondents

20. All the four respondents support or have no adverse comment on the alignment of the expiry date of the existing assignments of the Available Spectrum and the payment of SUF for the extended period of assignment of the frequency block A5, amounting to the lump sum SUF paid by HKT for the current assignment term of 15 years of the frequency block A5 on a pro-rata basis.

Responses of CA

21. With the support or no adverse comment from all the respondents and as explained in paragraphs 32 – 34 of the Statement, CA maintains its view to align the expiry date of the existing assignments of the Available Spectrum to 31 May 2028 in order to simplify future administrative and licensing arrangements and facilitate a smooth handover of the Available Spectrum among the assignees. In other words, the existing assignment of the frequency block A5 to HKT will be extended by 11 days from 21 May 2028 to 31 May 2028, subject to the payment of SUF of about \$623,000 by HKT for the extended period of assignment of the frequency block A5.

***Question 7: What are your views on the proposed arrangements to shorten the new assignment term of the Available Spectrum to about ten years and ten months from 1 June 2028 to 30 March 2039?***

Views and Comments of the Respondents

22. CMHK, HKT and Hutchison generally support or indicate no adverse comment on the shortened assignment term of the Available Spectrum of about 10 years and 10 months. On the other hand, SmarTone opines that the standard assignment term of the spectrum concerned should be maintained for 15 years as MNOs have to make substantial investments in infrastructure to effectively utilise the spectrum and a shortened assignment period will create significant uncertainty, which may adversely impact long term investment decisions and the overall development of robust telecommunications networks.

23. HKT suggests that since the unified carrier licences (“UCLs”) currently held by the four MNOs, i.e. CMHK, HKT, Hutchison and SmarTone cover the period from 1 August 2024 to 31 July 2039, the issue of a new UCL with a validity period of 15 years will not be necessary if only these four MNOs

acquire spectrum in the upcoming auction so as to avoid the administrative inconvenience associated with the process normally adopted for the issue of a new UCL each time spectrum is assigned to a licensee. Instead, any spectrum acquired by the four MNOs can simply be added to their existing UCLs with effect from the assignment date of the Available Spectrum.

### Responses of CA

24. The Available Spectrum sits between the upper band and the lower band of the Remaining Spectrum in the 2.5/2.6 GHz band. The Remaining Spectrum has been assigned to the MNOs for the period from 31 March 2024 to 30 March 2039. If the standard spectrum assignment period of 15 years is adopted, the assignment period of the Available Spectrum will be from 1 June 2028 to 31 May 2043. As a result, the expiry dates for the assignments of the Available Spectrum and the Remaining Spectrum in the 2.5/2.6 GHz band will continue to be different and fragmented blocks will continue to exist, perpetuating the issue of non-contiguous assignments in the band. As elaborated in paragraph 36 of the Statement, a term of about ten years and ten months for spectrum assignment, which is coterminous with the expiry date of the assignment term of the Remaining Spectrum, will solve the issue of non-contiguous assignments in the band.

25. As elaborated in paragraph 38 of the Statement, a fee for the management of any radio frequency assigned shall be payable on the issue of a UCL and on each anniversary of the issue of the UCL remains in force in accordance with Schedule 3 to the Telecommunications (Carrier Licences) Regulation (Cap. 106V). It will be prudent to issue a new UCL for the re-assignment of the Available Spectrum in order to enable CA to collect spectrum management fee pursuant to Cap. 106V.

26. Given the considerations above, CA decides to maintain its view that the Available Spectrum will be re-assigned for a term of about ten years and ten months, i.e. from 1 June 2028 to 30 March 2039, and a new UCL with a validity period of 15 years will be issued to each successful bidder to effect the re-assignment of the Available Spectrum.

***Question 8: Do you have any views on the proposed licensing arrangements as specified in paragraphs 31 – 38 of the Consultation Paper?***

**Frequency Transfer**

Views and Comments of the Respondents

27. HKT, Hutchison and SmarTone support or have no adverse comment on the proposed frequency transfer arrangement that CA will only consider a transfer to GBL of up to 20 MHz of the re-assigned Available Spectrum that is equally contributed by HKT and Hutchison (i.e. 10 MHz or one 2 x 5 MHz block of the Available Spectrum<sup>6</sup> by each) to enable GBL to carry on with its existing scale and mode of operation if they so wish. CMHK, on the other hand, considers that the proposed frequency transfer arrangement is equivalent to granting allowance and flexibility ahead of any formal application from the relevant parties to enhance and facilitate their commercial positions in the coming auction.

Responses of CA

28. CA considers that the proposed frequency transfer arrangement does not grant any prior approval to application for transfer to GBL of the Available Spectrum should HKT and Hutchison successfully bid in the auction. It will be up to HKT and Hutchison to decide whether both of them will participate in the upcoming auction as separate entities or jointly through GBL as a single entity. If it is the former, HKT and Hutchison may submit a joint application with justifications to CA for its approval for spectrum transfer to GBL if they so wish. As explained in paragraph 41 of the Statement, CA decides to maintain its view of the proposed frequency transfer arrangement as set out in the Consultation Paper.

**Frequency Swap**

Views and Comments of the Respondents

29. CMHK, HKT and Hutchison support or have no adverse comment on the proposed arrangement of frequency swap in the 2.5/2.6 GHz band starting from the new assignment term of the Available Spectrum on 1 June 2028. SmarTone, on the other hand, suggests that any frequency swap

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<sup>6</sup> GBL holds 2 x 5 MHz of the Available Spectrum prior to the expiry of the existing assignment on 31 May 2028. The allowable limit for transfer to GBL by HKT and Hutchison of the rights to hold the re-assigned spectrum is set at 2 x 10 MHz in total due to the technical constraint rendered by the paired frequency block of 2 x 5 MHz each and the requirement of an equal amount of transfer by the two parties in order to mimic the existing operation of GBL.

application should not be considered until after the expiry of the first five years of the spectrum assignment in order to ensure the realisation of the full market value of the spectrum.

### Responses of CA

30. While it is of crucial importance to encourage competitive bidding, CA also recognises the possible enhancement of spectral efficiency through frequency swapping between MNOs. In particular, given the different expiry dates of the existing assignments of the Available Spectrum and the Remaining Spectrum and that the Available Spectrum lies between the upper band and the lower band of the Remaining Spectrum, it may not be possible for bidders to acquire contiguous blocks in the whole 140 MHz of spectrum in 2.5/2.6 GHz band to achieve higher spectral efficiency. As elucidated in the joint statement of CA and SCED issued in March 2021, following the re-assignment of all the spectrum in the 2.5/2.6 GHz band including the Available Spectrum on 1 June 2028, CA may consider any proposal of frequency swapping from MNOs provided that there are sound justifications such as enhancing spectral efficiency. As explained in paragraph 43 of the Statement, CA decides to maintain its view of the proposed frequency swap arrangement that spectrum assignees of the 2.5/2.6 GHz band may submit a joint application for frequency swapping mutually agreeable to them with sound justifications for CA's consideration starting from the new assignment term of the Available Spectrum on 1 June 2028.

## **SPECTRUM UTILISATION FEE**

***Question 9: Do you have any views on the proposal in relation to the setting and collection of SUF as specified in paragraphs 39 – 40 of the Consultation Paper?***

### **Level of the SUF and Method of Payment**

#### Views and Comments of the Respondents

31. All MNOs support SCED's proposal that each spectrum assignee will be given a choice of paying the SUF by lump sum upfront or by annual instalments. CMHK and HKT suggests that the pre-set fixed percentage increment applied to annual instalments of SUF should be lowered. In addition, CMHK proposes that SCED may make reference to the Composite Consumer Price Index (except for the category of alcoholic drinks and tobacco) listed by the Census and Statistics Department in setting the pre-set fixed percentage.

32. Regarding the level of the SUF, all MNOs urge SCED to take into account the shortened assignment term of the Available Spectrum when determining the reserve price which should be set at a minimal or reasonable level.

### Responses of SCED

33. SCED notes the support by MNOs for the choices provided for the payment method of SUF. In setting the increment in the annual instalment payment of SUF, SCED has all along adopted the latest medium-range underlying inflation forecast to reflect the time value of money to Government. As the annual instalment payment for the Available Spectrum will be spread over 11 years, SCED considers it not appropriate to set the annual increment by adopting the Composite Consumer Price Index for a particular year. SCED decides that the increment in the annual instalment payment for the Available Spectrum will be set at 2.5%, which is in line with the latest medium-range underlying inflation forecast.

34. The level of SUF will be determined by way of auction, which is the method which CA decides to adopt for the re-assignment of the spectrum concerned. SCED considers that the reserve price (for each frequency block) should be set at a level for kick-starting the competitive bidding process instead of a pre-estimated market price. A fine balance should also be achieved between ensuring the seriousness of bids and encouraging competition and participation in the auction exercise. When deciding the reserve prices nearer the time of the auction, SCED will take into account the shortened assignment term of the spectrum concerned as mentioned in paragraph 51 of the Statement and the prevailing global and local economic and investment environment, with a view to encouraging the telecommunications sector to continue investing in 5G infrastructure to promote Hong Kong as a smart city. In addition, with the Inland Revenue (Amendment) (Tax Deductions for Spectrum Utilization Fees) Ordinance 2024 taking effect in January 2024, the MNOs who acquire the spectrum in the 2.5/2.6 GHz band auction will benefit from the full tax deductions for the relevant SUF. Such initiative will provide more incentives for MNOs to bid the radio spectrum to further improve network quality, thereby enhancing further development in the telecommunications technology in Hong Kong.

**Communications Authority**  
**Secretary for Commerce and Economic Development**  
**1 April 2025**