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# Hutchison Telephone Company Limited

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**Response to the Consultation Paper on “Arrangements for Assignment of the Spectrum in the 6/7 GHz Band for the Provision of Public Mobile Services and the Related Spectrum Utilisation Fee”**

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**Date: 29 August 2023**





## I. Executive Summary

1. Hutchison Telephone Company Limited (“**Hutchison**”) makes this submission in response to the Consultation Paper entitled “Arrangements for Assignment of the Spectrum in the 6/7 GHz Band for the Provision of Public Mobile Services and the Related Spectrum Utilisation Fee” (the “**Consultation Paper**”) jointly issued by the Communications Authority (the “**CA**”) and the Secretary for Commerce and Economic Development (the “**SCED**”) on 18 July 2023.
2. Hutchison welcomes the CA’s proposal to assign 400 MHz of spectrum in the frequency ranges of 6570 - 6770 MHz and 6925 - 7125 MHz (the “**6/7 GHz Band**”) for the provision of public mobile services, including the fifth generation (“**5G**”) mobile services and beyond in Hong Kong. However, we have concerns over the long-term overall spectrum planning for these frequency ranges, as well as the timing of the proposed auction and assignment.
3. Firstly, the proposed arrangements for assignment of only 400 MHz of spectrum in the 6/7 GHz Band would create an artificial “gap” and fragmentation in the band plan. As such, we suggest that the CA should take a more holistic approach to the long-term spectrum design and allocate the entire 700 MHz of spectrum between 6425 – 7125 MHz for mobile services at the proposed auction.
4. Our proposed assignment of the entire 700 MHz would be aligned with the recent assignment on the Mainland China, where the Ministry of Industry and Information Technology (“**MIIT**”) announced in June 2023 that the 6425 – 7125 MHz band (a total of 700 MHz) would be allocated. Further, given the optimal channel bandwidth for 5G in the 6/7 GHz Band is 100 MHz, our proposal would achieve optimal spectral efficiency for the benefits of the telecommunications industry and the public of Hong Kong as a whole.
5. Secondly, considering that (1) the CA needs time to relocate the concerned users of fixed links and outside broadcasting links, as well as to clear out the 6425 – 6570 MHz and 6770 – 6925 MHz bands; and (2) the lack of ecosystem and available equipment in the next two years, it would be premature to hold an auction for the 6/7 GHz Band next year in 2024 and to release the spectrum to the market as early as 1 January 2025<sup>1</sup>.
6. In this submission, we will explain our concerns mentioned above and provide our response to the specific questions raised in the Consultation Paper in Part II.

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<sup>1</sup> Paragraph 5 of the Consultation Paper.



## II. Response to the Specific Questions in the Consultation Paper

Question 1: Do you have any views on the proposed amendments to the HKTFA regarding the allocation of the 6425 – 7075 MHz band for mobile service with FS and FSS (Earth-to-space) on a co-primary basis?

7. Hutchison agrees with the proposed amendments to the HKTFA concerning the allocation of the 6425 – 7075 MHz band for mobile service with FS and FSS (Earth-to-space) on a co-primary basis.

Question 2: Do you have any views on assigning spectrum in the 6/7 GHz band by way of auction and allowing all interested parties, subject to minimal qualification requirements and the connected bidders restrictions, to apply for participation in the auction?

8. We have no adverse comments on the proposal to allow all interested parties, subject to minimal qualification requirements and the connected bidders restrictions, to apply for participation in the auction.
9. However, we have concerns over the timing of the proposed auction, which is scheduled for next year. Upon review of the global demand and usage, we understand that the ecosystem is only in the making and relevant equipment will not be available in the next two years.
10. Considering that the (1) CA needs time to relocate the concerned users of fixed links and outside broadcasting links, as well as to clear out the 6425 – 6570 MHz and 6770 – 6925 MHz bands; and (2) the lack of ecosystem, it would be too early to conduct an auction for the 6/7 GHz Band next year in 2024.
11. We suggest that the CA should monitor the market development and ecosystem closely in order to decide on its assignment timetable. The current timeline, i.e. the 6/7 GHz Band could be released to the market as early as 1 January 2025, would be premature.



Question 3: Do you have any views on the proposal that 400 MHz of spectrum in the 6/7 GHz band be divided into twenty frequency blocks, with a bandwidth of 20 MHz each, for assignment?

12. From the perspective of efficient use of spectrum to the benefits of the general public in Hong Kong, Hutchison considers it more appropriate to assign the entire 700 MHz between 6425 – 7125 MHz (instead of only 400 MHz) of spectrum in the 6/7 GHz Band in one go for mobile services. Otherwise, the proposed assignment would create an artificial “gap” and fragmentation in the band plan. With a block of 155 MHz spectrum in between (6770 – 6925 MHz band) and another block of 145 MHz spectrum at the side (6425 – 6570 MHz band), the 6/7 GHz Band cannot be used efficiently.
13. Given the optimal channel bandwidth for 5G in the 6/7 GHz Band is 100 MHz, our proposal would achieve optimal spectral efficiency for the benefits of the telecommunications industry and the public of Hong Kong as a whole.
14. Further, the assignment of the entire 700 MHz would align with the recent assignment announced by the MIIT that the entire 6425 – 7125 MHz band (a total of 700 MHz) would be allocated for IMT in Mainland China. In view of the above, we suggest that the CA should take a holistic approach to the long-term spectrum planning for the 6/7 GHz Band.
15. Indeed, it is unclear from the Consultation Paper why the proposed assignment of the 400 MHz would be fragmented (200 MHz plus + 200 MHz) instead of contiguous block of 400 MHz. It remains unknown whether the Government has any tentative plans to assign the rest of the 300 MHz spectrum in the 6/7 GHz Band in the near future.
16. As to the proposed band plan, given it is in line with the technical standards set by the industry standardization body 3<sup>rd</sup> Generation Partnership Project (“3GPP”), Hutchison agrees with the proposal to divide the 6/7 GHz Band into twenty frequency blocks with a bandwidth of 20 MHz each if only 400 MHz is available for assignment. In the event that the amount of the upper 6 GHz spectrum available for assignment be extended to 700 MHz, the size of the frequency blocks shall be revised accordingly. We recommend that the full 700 MHz be divided into 14 frequency blocks with a bandwidth of 50 MHz each, or seven frequency blocks with a bandwidth of 100 MHz each.



Question 4: Do you have any views on the proposed spectrum cap of 140 MHz to be imposed on each bidder in the auction of spectrum in the 6/7 GHz band?

17. As discussed in Paragraphs 12 to 16 above, it is of utmost importance that the full upper part of the 6 GHz Band (i.e. the entire 700 MHz) be assigned altogether at the same time. Such arrangement not only facilitates the formation of a larger contiguous block in the 6/7 GHz Band to achieve higher spectral efficiency, but also makes a spectrum cap of 140 MHz or higher feasible. Larger continuous spectrum blocks give mobile network operators an opportunity to deploy competitive 5G networks with innovative mobile applications.
18. According to a recent report entitled “5G Spectrum – GSMA Public Policy Position” published by GSMA in June 2022, regulators should aim to assign at least 100 MHz per operator in the 5G mid-bands, given that 100 MHz channels have become international best practice and are implemented in some 5G-leading markets. In view of the above, our recommendation for assignment of the entire 700 MHz in one-go will further allow mobile operators to access multiple blocks of 100 MHz in the 6/7 GHz Band and avoid fragmentation of spectrum when the reserved frequencies in the band are to be assigned at a later time.

Question 5: Do you have any views on the proposed format of the auction for the assignment of spectrum in the 6/7 GHz band?

19. Hutchison has no adverse comment on the adoption of the clock auction format for the assignment of the spectrum in the 6/7 GHz Band.

Question 6: Do you have any views on the proposed licensing arrangements as specified in paragraphs 26 to 31 above? Among others, do you have any views on the network and service rollout obligations proposed to be imposed on the successful bidders of spectrum in the 6/7 GHz band?

20. For the reasons explained above, it is not the appropriate time for assignment of the 6/7 GHz Band in 2025. Yet, if the Government is minded proceeding with the assignment in any event, then it should relax the network and service roll-out obligations given the uncertainties of the supply of the infrastructure and user equipment.
21. Hutchison agrees with the proposed licensing and validity period, restrictions on frequency swap and technology neutral policy.



Question 7: Do you have any views on the proposal in relation to the setting and collection of SUF as specified in paragraphs 32 to 34 above?

22. On the setting of the level of the spectrum utilization fee (the “SUF”), we opine that the reserve price should be set at a minimal level. Letting the market decide on its appropriate price level is in line with the market-based approach adopted by the CA. Reference should be made to the last 5G auctions for the spectrum in the 600 MHz, 700 MHz, 850 MHz, 2.5/2.6 GHz and 4.9 GHz bands held in 2021, where the reserve prices were set in the range of HK\$2 million per MHz to HK\$ 5 million per MHz.
23. Regarding the payment methods, we support the proposition that spectrum assignees should be given an option to pay the SUF either by lump-sum payment upfront or by annual instalments.
24. In addition, we suggest that the SCED should give the spectrum assignees the permission and flexibility to subsequently alter their chosen payment method upon having satisfied certain conditions set by the SCED. Given the payment is for 15 years tenor, this flexibility is of great meaning to the assignees. Such need often arises at the time when there are changes in the market environment, economic developments, and the assignees’ financial situations, etc. The flexibility would help the industry better utilize its fund and facilitate investment on more innovative products and services.

~ THE END ~