15 August 2023 !

Office of the Communications Authority
29/F., Wu Chung House
213 Queen's Road East
Wan Chai
Hong Kong
Attention: Principal Regulatory Affairs Manager (R22)

RE: GSMA's comments to the consultation paper on the "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"

Dear Sir/Madam:

The GSMA would like to thank the Communications Authority (CA) and the Secretary for Commerce and Economic Development (SCED) for the opportunity to comment on the consultation for the *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 GSMA commends the CA and SCED to start the process early to consult the industry on a plan to assign the band to mobile operators and wishes to provide the following comments for consideration.

6 GHz is **the largest remaining single block of mid-band spectrum** that can be assigned to licensed mobile in the foreseeable future. It can help 5G to play a central role in sustainable social and industrial development. As enhanced broadband, IoT, data, analytics, and insight permeate every aspect of society, mobile networks require a long-term vision for the sustainable future.

Mid-bands will deliver the most economic value[1] of the three spectrum ranges – low, mid and high bands – that are required for 5G. They will drive an increase of more than $610 billion in global GDP in 2030, producing almost 65% of the overall socio-economic value generated by 5G. However, if spectrum is constrained, **40% of that impact could be lost**: $360bn in 2030 alone.

A report published by the GSMA[2] shows that regulator will need to make **2 GHz of mid-band spectrum bandwidth available in the 2025-2030 timeframe** for the development of 5G and future generation of mobile technologies. This is the average value per market globally needed to safeguard the sustainable development of mobile broadband that will be crucial to meeting growing consumer demands for new services, mobile data consumption, as well as the needs of flourishing enterprise use cases.

In June at GSMA's MWC Shanghai 2023, China's Ministry of Industry and Information Technology (the MIIT) announced the identification of the upper part of the band to IMT in the country's table of frequency allocations, that took effect from 1 July 2023. It is a big step towards commercial 6 GHz 5G ecosystem.

Mainland China's efforts towards the 6 GHz band don't come as a surprise. Conducive spectrum policies for the mid-bands, especially the 2.6 GHz and 3.5 GHz, have helped China to deploy the world's largest 5G networks with over 2.7 million 5G base stations by the end of April 2023, and to be on track to become the first country to reach 1 billion 5G connections in 2025. The ability for 6 GHz to reuse the 3.5 GHz grid also makes it attractive for cost-effective upgrades of the 5G networks. Deutsche Telekom's test in Bonn, Germany, confirmed gigabit speeds and that the right inter-site distances can allow the use of existing grids. This will accelerate the roll-out process, allowing users to reap the benefits quicker. It also means that there

[1] https://www.gsma.com/spectrum/resources/mid-band-5g-spectrum-benefits/
[2] https://www.gsma.com/spectrum/resources/5g-mid-band-spectrum-needs-vision-2030/

is a valuable opportunity for additional spectrum in the wider C-band, such as 3.6 GHz and above, to be released to mobile operators in the near term to improve network capabilities and pave the way for the 6 GHz expansion in the medium term between 2025-2030.

Countries are also starting to think more strategically about the band's future. While the WRC-23 agenda discusses the entire 6 425 – 7 125 MHz band in only the EMEA region, **it is clear there is worldwide support** for using this spectrum for licensed mobile.

Mobile operators, universities and vendors have also carried out tests in Brazil, China, France, Germany, Italy, Russia, Thailand, Switzerland, and the UAE since last year. 5G growth has fast-tracked interest in the band and spurred equipment development. All these developments are further proof that 6 GHz is a viable option for securing 5G's future growth.

6 GHz is **vital to meeting mid-band spectrum needs of 2 GHz** on average, per market by 2030. Early progress on the band by the MIIT adds significant scale for future growth and innovation that will form part of global development – and the worldwide ecosystem – for 6 GHz IMT systems.

The GSMA wishes to provide the following comments to questions 1 -3 presented in the consultation document:

> *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?*
>
> The GSMA agrees with the proposed amendment to the HKTFA to allocate the 6 425 – 7 075 MHz band for MOBILE co-primary service. The GSMA would also suggest **an identification of the 6 425 – 7125 MHz band for IMT in the HKTFA** in addition to the MOBILE co-primary allocation to harmonise with Mainland China.
>
> *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?*
>
> Mobile operators are better placed to respond. In principle, GSMA strongly encourages the CA and SCED to design a well-consulted auction plan that accommodates the views of the industry to strive for an efficient auction assignment.
>
> *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?*
>
> Hong Kong has assigned a total 958.4 MHz of mid-band spectrum to mobile operators. This leaves a larger-than-1 GHz bandwidth gap to satisfy the mid-band spectrum needs of 2 GHz on average, per market by 2030. In addition, the reserved blocks of 6 425 – 6 570 MHz (145 MHz) and the 6 770 – 6 925 MHz (155 MHz) in the proposal will limit mobile operator's ability to access blocks of 100 MHz contiguous spectrum when those reserved frequencies get assigned eventually, which creates fragmentation of assignments in the 6 425 – 7 125 MHz band as well as uncertainty to incumbents and mobile operators for the planning of their respective investments. The GSMA therefore recommends the CA and SCED to offer **the entire 700 MHz between 6 425 – 7 125 MHz at the same time**. This will allow mobile operators to access multiple blocks of 100 MHz contiguous spectrum in the same assignment across the full upper 6 GHz band to safeguard the ongoing development of innovative mobile broadband applications enabled by 5G services and beyond, and provide better clarity and certainty to all stakeholders regarding changes to the band.

Questions 4 – 7:

The GSMA has no comments to questions 4 – 7 at this stage.

Once again, the GSMA appreciates the opportunity to comment on this consultation and look forward to continuing the close dialogue with the CA and the SCED on the above matters.

Yours sincerely,

Joe Guan
Head of Policy, Greater China
GSMA
jguan@gsma.com