

Mr. Seah Guan Hai

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Director-General (Telecoms & Post),
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Dear Aileen Chia (Ms),

Subject : Second Consultation on 5G Mobile Services and Network

While I am as excited as everyone else on what 5G can bring to Singapore, I also have concerns about the potential impact of high frequency EMF radiation on our health, particularly of our children, pregnant women, sick and ageing population. As such, I have the following questions/ concerns :

- a) Our current 4G network operates in the 2.5 GHz band. With 5G, we will be adding 3.5 GHz and 26-28 GHz frequency bands in future months and years. Hundreds if not thousands more cell towers will be erected nearer and on rooftops of our homes when COPIF (Code of Practice for Info-Com facilities in Buildings) is enforced, thereby exposing us to a much higher frequency EMF radiation at much higher intensity levels. Considering that cells in our body operate at less than 50 Hz frequency range with extremely low intensity levels, I am very concerned of its potential impact on our health.

Question : Can IMDA and MOH jointly declare that 5G frequencies and intensity levels will be safe for our body ?

- b) Clause 145 of abovementioned paper indicated that studies have shown that the new advanced radio & core architecture that comes with 5G, will lead to lower EMF levels compared to existing.

Question : Where can we find details of such studies ?

- c) In Singapore's report to WHO on EMF project, it was stated that Singapore is aware that IARC (International Agency for Research for Cancer) has classified RF Electromagnetic fields and ELF magnetic fields as Class 2B Carcinogen (Possibly carcinogenic to humans).

Question : Has a Health Impact Assessment been done? If so, where can we find details of this? If not, why not ?

- d) From <https://ehtrust.org/policy/international-policy-actions-on-wireless/> (a database of Worldwide Policies on Cell Phones, Wireless and Health), it is obvious that many countries are concerned enough to stipulate some forms of regulatory standards and guidelines.

Question : When will our authorities come up with guidelines and standards of our own ?

e) I am certain you are aware of an International Appeal letter written in May 2015 by 236 EMF scientists from 43 countries to UN Secretary General and WHO Director General, stating their concerns and collectively requesting the following :

- i) Children and pregnant women be protected
- ii) Guidelines and regulatory standards be strengthened
- iii) Manufacturers to be encouraged to develop safer technology
- iv) Public to be fully informed of the potential health risks from EMF radiation and be taught mitigation strategies
- v) Medical professionals be educated about the biological effects of EMF and be provided training on treatment of patients with EMF sensitivity
- vi) Government to fund training and research on EMF and health, independent of industry and mandate industry cooperation with researchers
- vii) Radiation-free zones to be established

Question : May I request for our authorities to consider doing the above when rolling out 5G?

f) Proponents of 5G project often claim there is no evidence to link cancer to EMF radiation yet they have not provided any convincing evidence to show that the EMF frequencies and intensity levels for 5G are safe for humans. Continuing to use compliance to outdated International standards on safe EMF levels as an excuse for not doing anything more, is not going to gain acceptance of Singaporeans. It is recognised that it will take years even decades for sufficient data to be collected worldwide and effort to be made to link EMF radiation conclusively to cancer and other diseases. Meanwhile, we should be on the side of caution when rolling out 5G. Decision must not be taken in haste without due consideration of our health.

As I said in my opening, while we are excited for this project, we must take the necessary steps to address the above concerns and mitigate potential health risks arising.

Useful Resource links

<https://ehtrust.org/policy/international-policy-actions-on-wireless/>

<https://ehtrust.org/wp-content/uploads/5G-What-You-Need-to-Know-International-2.pdf>

<https://ehtrust.org/wp-content/uploads/PDF-Hempfield-School-District-Final-Presentation-.pdf>

Thank you.

Yours Faithfully,



Seah Guan Hai