



**BY EMAIL ONLY**

Director of Environmental Protection

E-mail: enquiry@epd.gov.hk

7 January 2022

Dear Sir/Madams,

**A Brief Review of AQHI Data of Hong Kong for 2021**

Green Power, a local charitable green group, has been monitoring the Air Quality Health Index (AQHI) and the previous Air Pollution Index (API) data for over two decades. Enclosed with this letter is a brief report produced by Green Power regarding our AQHI analyses, i.e. *A Brief Review of AQHI Data of Hong Kong for 2021*.

From the past AQHI statistics provided by EPD for 15 General Air Quality Monitoring Stations (General Stations) during 2014-2021, both total number of HHR hours (hourly AQHI  $\geq 7$ ) and HHR days (daily maximum AQHI  $\geq 7$ ) decreased from the highest levels in 2014 to their lowest records in 2016, and winded upwards near to the highest level 2019, then dropped to almost the lowest levels in 2020 and rebounded moderately in 2021. Such trend in the past eight years revealed that the health risk of the public associated with air pollution varied but had not been relieved.

The total number of hours with AQHI = 10+ recorded in all General Stations increased substantially from 170 hours in 2014 to the highest 276 hours in 2019. The figures dropped significantly in 2020 and 2021 to 72 and 37 hours respectively. Similarly, the total number of days with highest AQHI = 10+ recorded in all General Stations increased from 53 days in 2014 to 65 and 61 days in 2017 and 2019 respectively, and dropped to 22 and 14 days for 2020 and 2021 respectively.

The sudden decrease in HHR hours and days in 2020, especially those with AQHI = 10+, was coincident with the community lockdowns in Mainland, strict border passenger and freight control and local quarantine measures (e.g. work-from-home) due to outbreak of pandemic of Covid-19 in early 2020. Therefore, the low frequency of HHR hours and days decreased may be attributable to the less emission locally and cross-border from transportation, industrial activity and energy production in the Pearl River Delta area.

According to the AQHI findings from 2014 to 2021, the western territory (i.e. Tuen Mun, Yuen Long and Tung Chung) has been experiencing the worst air quality among the General Stations since 2014 in view of annual average numbers of HHR hours (hourly AQHI  $\geq 7$ ) and days (daily maximum AQHI  $\geq 7$ ), which may be attributable to the presence of several major emission sources, including international airport, power plants, trunk roads.

In 2021, Northern, a new General Station established in 2020, was amongst the top five most polluting General Stations, namely Tuen Mun, Yuen Long, Tung Chung, Northern and Tai Po, in terms of both total HHR hours (hourly AQHI  $\geq 7$ ) and days (daily maximum AQHI  $\geq 7$ ). These five districts are located at northern and western part of the territory where Northern Metropolis development has been announced in the 2021 Policy Address, and major developments are on-going on North Lantau.

Major existing and planned development areas on Lantau include Tung Chung New Town Extension, Residential and Commercial Development atop Siu Ho Wan Depot with planned population of 135,800 to 161,800. The entire Northern Metropolis include Tin Shui Wai, Yuen Long, Fanling, Sheung Shui, Hung Shui Kiu/Ha Tsuen New Development Area, Yuen Long South Development Area, San Tin/Lok Ma Chau Development Node, Kwu Tung North/Fanling North New Development Area, Man Kam To Development Corridor and New Territories North New Town that can eventually accommodate a residential population of about 2.5 million under the Development Strategy. Kam Tin South Development will accommodate population of 92,800. The population in 2021 of Tuen Mun and Tai Po are 503,100 and 311,200 respectively.

There will be probably 3.5 million population, a half of Hong Kong's population, will be living in the five most polluting districts. However, the Administration has downplayed the anticipated air pollution in their planning for these new or existing development areas.

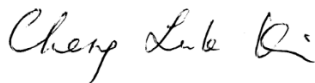
Over the period 2014 to 2021, some perceived polluted districts including Kwun Tong, Kwai Chung and Tsuen Wan experienced a decrease in both HHR hours (hourly AQHI  $\geq 7$ ) and days (daily maximum AQHI  $\geq 7$ ). Such trend should be attributable to the statutory control measures of sulphur content of marine vessels fuel enacted in 2014, 2015 and 2019.

On the other hand, the perceived less polluted districts, Tai Po, subtly placed itself amongst the top five most polluting General Stations in the past eight years although no obvious increase in both HHR hours (hourly AQHI  $\geq 7$ ) and days (daily maximum AQHI  $\geq 7$ ) have been recorded. Such changes may reveal a major increase in emission in Tai Po that study and action to prevent worsening are needed urgently.

For any queries, please contact the undersigned at Green Power (T: 3961 0200, Fax: 2314 2661, Email: [lkcheng@greenpower.org.hk](mailto:lkcheng@greenpower.org.hk))

Thank you very much for your kind attention. I look forward to your favourable response.

Yours faithfully,



CHENG Luk-ki  
Director

**Encl.**

*A Brief Review of AQHI Data of Hong Kong for 2021*

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