



BY EMAIL ONLY

Mr. WONG Kam Sing, JP
Secretary for Environment
Interdepartmental Working Group on Climate Change
Email: sen@enb.gov.hk

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Dear Mr. Wong,

**A Brief Paper on Adapting to Climate Change in Hong Kong -
Economic Impacts of Ozone Pollution Due to Global Warming**

In response to the climate agreement of 2015 Paris Climate Conference (COP21), Hong Kong should take a more proactive role to combat and adapt to the adverse impacts of global warming in order to protect people's life and health, the ecosystem and minimize the associated economic loss.

Ozone at ground level has been identified as causing damage to lung tissue, particularly among the elderly and children-reducing pulmonary function and sensitizing airways to other irritants and allergens. Ground-level ozone affects not only those with impaired respiratory function, such as persons with asthma and chronic obstructive lung disease, but also healthy individuals. Recent overseas studies provide evidence of a positive correlation between ground-level ozone and respiratory-related hospital admissions in several cities in the United States.

Formation of ozone from the primary air pollutants, i.e. nitrogen dioxide and volatile organic compounds (VOCs) is highly dependent on air temperature. Global warming is intensifying as a consequence of increase in greenhouse gas concentration in the Earth's atmosphere. Therefore, a rise in temperature will worsen ozone pollution generally even the emission of nitrogen oxides and VOCs keep unchanged.

Hong Kong's ozone pollution will be exacerbated due to the elevated temperature. However, few local studies were conducted on this aspect. Green Power preliminarily explores the impacts of climate change on local air quality taking ozone pollution as example. A calculation predicted the future economic burden due to increase in ozone concentration under global warming. Our society will pay an additional health cost of HK\$ 988 to 6516 million per year in this aspect. Please refer to the enclosed paper for further details.

We believe that this amount may only represent a very tiny portion of cost lost to climate change, as climate change impacts not only public's health but also a much wider scope including power supply, food supply, potable water resources, infrastructure, and also economy (consumerism, insurance, etc).

Therefore, the government must lead the Hong Kong's society to recognize the potential impacts of climate change, and formulate surveillance and adaptation measures to minimize any impacts on all sectors of the society.

Yours sincerely,

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Division Head, Scientific Research and Conservation
GREEN POWER

Encl. A brief paper on "Adapting to Climate Change in Hong Kong - Economic Impacts of Ozone Pollution Due to Global Warming"