BUSINESS ENVIRONMENT COUNCIL 商界環保協會

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(Public Consultation on Air Quality Objectives Review)
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**Submission on Air Quality Objectives Review**
**Views from Business Environment Council Limited**
**商界環保協會有限公司**

Over the last 27 years, Business Environment Council Limited 商界環保協會有限公司 (BEC) has played a leading role in advocating the business case for environmental excellence, given the importance of sustainable development to Hong Kong. Our members are committed to actively engage with the HKSAR Government (the Government) to help develop a supporting policy framework as well as impactful implementation in respect of environmental protection and sustainability.

Views expressed in this submission are those of BEC, in line with BEC's Mission and Vision as well as policy position on relevant issues, but may not necessarily be the same as the views of each individual member. BEC is an independent charitable membership organisation comprising over 200 member companies from Hong Kong's major holding companies to small and medium-sized enterprises.

## Introduction

Hong Kong's Air Quality Objectives (AQOs) were first established in 1987 for 7 air pollutants – sulphur dioxide ($SO_2$), nitrogen dioxide ($NO_2$), total suspended particulates (TSP), respirable suspended particulates (RSP or $PM_{10}$), carbon monoxide (CO), ozone ($O_3$) and lead (Pb) – under the Air Pollution Control Ordinance (APCO, Cap 311). APCO is the principal law for air quality management and control in Hong Kong, and AQOs are put in place to promote the conservation and best use of air in the public interest according to the Ordinance. The Government's responsibility is to achieve the AQOs as soon as practicable.

In October 2006, the World Health Organization (WHO) released an update of Air Quality Guidelines (AQGs) for global application. The WHO AQGs provide the scientific basis for governments and jurisdictions to develop their air quality standards and policies with the aim of protecting human health. Interim targets



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(IT) for different air pollutants were also recommended so that individual country or city can set its air quality standards progressively with due consideration of a range of factors that might determine the pace of overall air quality management, such as the status of technical capabilities, economic development and air pollution-induced health risks.

In response to the release of the updated WHO AQGs and the growing demand from the local community for Hong Kong's AQOs to be tightened, the Government undertook Hong Kong's first AQOs review in 2007 through the commissioning of a consultancy study and a series of public consultation and engagement activities. The proposed new AQOs and a suite of air quality improvement measures were announced in January 2012, and the new AQOs became effective on 1 January 2014.

Importantly, a new mechanism was added as a statutory requirement to regularly review the progress in air quality management, the extent of attainment of the new AQOs, and the need to further tighten the AQOs. The frequency of the review has been set to be no less than every five years.

Under such mechanism, the Government started a new round of AQOs review. The AQOs Review Working Group (Working Group) was set up in mid-2016 to assess air quality improvement in the past few years and to discuss the setting of the new AQOs to be attained in 2025. With the completion of the review in December 2018, the Government in July 2019 launched a 3-month public consultation on the findings of the review. Public views are welcome on or before 11 October 2019.

**The Proposed New AQOs**

BEC supports the Government's proposal to tighten (a) the 24-hour AQO for $SO_2$ from 125μg/$m^3$ (WHO AQGs IT-1 level) to 50μg/$m^3$ (IT-2 level) with three exceedances allowed; and (b) the annual AQO for fine suspended particulates (FSP or $PM_{2.5}$) from 35μg/$m^3$ (IT-1 level) to 25μg/$m^3$ (IT-2 level), and its 24-hour AQO from 75μg/$m^3$ (IT-1 level) to 50μg/$m^3$ (IT-2 level) with the number of exceedances allowed increased from the current nine to 35. BEC believes that the new proposal with more stringent objectives would get Hong Kong closer to the ultimate goal of attaining the WHO AQGs and better protect human health against air pollution.

Since the AQOs have been used as a yardstick for the approval of environmental impact assessment (EIA) reports and the issuance of environmental permits (EPs), BEC suggests that a transitional period of 36 months, which is consistent with past practice, should be granted to designated projects with EPs already granted before the effective date of the new AQOs. The Government, however, should lead by example and use the new AQOs as



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the benchmark for air quality impact assessment under EIA studies for government projects once the proposed AQOs are passed by the legislators. The Government should also encourage other project proponents to do the same.

**Air Quality Management Strategy**

Hong Kong's air quality has generally improved over the past years through the implementation of different air quality improvement measures set out in *A Clean Air Plan for Hong Kong* published in 2013 by the Government. Except for $O_3$, concentrations of other criteria pollutants dropped between 2013 and 2018, and AQOs for $SO_2$, $PM_{10}$, $PM_{2.5}$, CO and Pb have been attained. It demonstrates that the Government has been effective in air pollution control with respect to most emission sources, and the results are encouraging.

Nonetheless, roadside air quality remains an acute problem in Hong Kong, with annual average concentration of $NO_2$ currently at an unhealthy level (about two times of the Hong Kong AQO limit). Besides, concentrations of $O_3$ has been rising in recent years, control of which would require local control as well as regional collaboration.

To further enhance air quality management and control in Hong Kong, BEC highly recommends the Government to update its air quality management blueprint as a priority. *A Clean Air Plan for Hong Kong* has provided scientific evidence, rationale, direction and solutions in emissions control in the past few years and has served Hong Kong well. It is therefore important for the Government to roll out *A Clean Air Plan for Hong Kong 2.0 (Clean Air Plan 2.0)* as soon as possible to set out new targets, to focus on new challenges, and to foster inter-departmental, cross-sector and cross-border collaboration. In this connection, BEC acknowledges a list of potential medium- and long-term measures included under Annex 3 of the consultation document to further improve air quality; these important future initiatives must be clearly set out in *Clean Air Plan 2.0* with implementation strategy including key milestones, timelines and responsible government agencies.

To tackle roadside air pollution, carbon emission and traffic congestion, BEC reiterates the importance of taking an integrated approach of trip avoidance/reduction, transport demand management, and the promotion of new energy vehicles.[1] This can be implemented through an "Avoid-Shift-Improve" approach – avoid unnecessary, short-distance journeys on

[1] See BEC's submission on the Chief Executive's 2019 Policy Address (https://bec.org.hk/files/images/BEC_Policy_Submission/BEC_Submission_2019_Policy_Address.pdf) and on Hong Kong's long-term decarbonisation strategy (https://bec.org.hk/files/images/BEC_Policy_Submission/BEC_Submission_on_Long-term_Decarbonisation_Strategy_20190918.pdf)



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mechanised mode of transport by promoting walking and cycling; shift essential, long-distance journeys from road-based, mechanised mode of transport to public, mass transport (preferably non-road based); and improve remaining road-based, mechanised travel by using new energy vehicles (such as vehicles powered by electricity, biofuel[2], hydrogen fuel cell and others), phasing down new sales of internal combustion engine vehicles, and retrofitting existing vehicles with emission reduction devices and ensuring those already fitted are working properly. Tail-pipe solutions are effective, but other options through transport and urban planning as described above should also be considered. The Government should also provide policy support and financial incentives, where appropriate, to facilitate the transition to new energy vehicles.

In addition, BEC suggests the Government to provide real-time roadside air quality data as part of the smart city initiative. Better data provision and the presentation of air quality data in greater granularity are important to inform the general public their travel decision with the knowledge of local roadside air quality condition and associated health risk. It is equally important to inform policymakers for the formulation of effective control measures. As such, the Government should consider increasing the number of roadside air quality monitoring stations in order to improve data collection and spatial coverage.

Reducing air pollutant emissions in absolute term is important, and BEC welcomes measures to continue such reduction. On the other hand, reducing people's exposure to air pollution is also critical in lowering the acute and chronic health effect on human health. BEC argues that this is an area where control measures should be focused in the future. For example, people's exposure to air pollutant does not only take place at the roadside. Air quality in transport facilities such as semi-confined public transport interchanges (PTI) is often overlooked. In fact, over a hundred complaints regarding poor air quality in PTI were filed between 2014 and April 2018.[3] In this regard, BEC strongly urges the Government to strengthen air quality monitoring at the PTIs and to swiftly upgrade ventilation facilities in problematic PTIs in order to safeguard the health of the passengers using those facilities.

According to the latest air pollutant emission inventory compiled by the Environmental Protection Department (EPD), vessels remained the largest local emission source of $SO_2$, $NO_X$, $PM_{10}$, $PM_{2.5}$ and the second largest source of CO. While the implementation of the fuel switch at berth regulation since July 2015 and the new fuel for vessels regulation effective from January 2019 that requires all vessels to use compliant fuel[4] within Hong Kong waters, sailing or

[2] Preferably biofuel sustainably sourced from local waste feedstock.
[3] See the question by the Hon Kenneth Leung to the Transport and Housing Bureau. https://www.info.gov.hk/gia/general/201805/16/P2018051600309.htm
[4] Compliant fuel refers to low-sulphur marine fuel with sulphur content not exceeding 0.5%, liquefied natural gas (LNG) or any other fuel approved by the Director of Environmental Protection.



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berthing, have made substantial reduction in the emission of $SO_2$ and PM from ships, there is still room to improve especially regarding the emission of $NO_X$. In this respect, BEC recommends the further tightening of compliant fuel to marine fuel within Hong Kong waters with sulphur content not exceeding 0.1% and a feasibility study on liquefied natural gas (LNG) bunkering in Hong Kong, with LNG as a compliant fuel that is also capable of reducing the emission of $NO_X$ in addition to $SO_2$ and PM. Besides, BEC also calls for the Government to pilot the use of electric ferries and application of other green technologies in local ferry operation as soon as possible. The pilot may also include the testing of innovative business model and service agreement that enable investment in green ferries and supporting infrastructure.

**Conclusion**

Hong Kong's long-term goal in terms of air quality management must be set to achieve the WHO AQGs. This is important for the wellbeing of our population. This is also important for the business sector as clean air is one of the key considerations for talents to work and for investors to set up businesses in Hong Kong. BEC therefore welcomes the regular AQO review mechanism as a continuous process for evaluation and improvement, and is encouraged by the work and impact of the Working Group. It is suggested that the experience of the first review cycle should be studied thoroughly by the Government so as to inform and improve the planning and delivery of the next review cycle.

For queries related to this submission, please contact our Chief Executive Officer, Mr Adam Koo at adamkoo@bec.org.hk.

Yours sincerely,

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