

**Legislative Council**  
**Panel on Environmental Affairs**  
**Subcommittee on Improving Air Quality**  
**Responses to the Follow-up Actions**  
**Arising from the Discussion at the Meeting on 16 April 2012**

- (1) **To advise the feasibility of updating the Air Pollution Index (API) based on the proposed Air Quality Objectives (AQOs) before formal promulgation of the latter in 2014. To consider increasing the number of air quality monitoring stations from 11 to 18 using the 18 districts as the basis. Instead of a regular review in every five years, consideration should be given to reviewing AQOs more often (say every two years) or conducting a mid-term review during the interim to take account of the changes in Hong Kong and the River Delta Region (PRD). To also advise the manner in which the review will be conducted.**

(a) Air Pollution Index

The API informs the public of the air pollution level as benchmarked against the prevailing AQOs. It has been providing a simple way of describing air pollution levels in Hong Kong. To tie in with the updating of the AQOs, we will correspondingly review and improve the existing API system.

(b) Air Quality Monitoring

The current air quality monitoring network in Hong Kong comprises 14 air quality monitoring stations (AQMSs) - 11 general and 3 roadside AQMSs. It covers major areas in the territory from East to West and from South to North. In terms of land uses, it covers different types and density of development, such as residential areas, mixed residential/commercial areas, mixed residential/commercial/industrial areas, rural areas and busy urban roadside areas.

To ensure that our air quality monitoring network collects representative air quality data, we have taken account factors such as spatial distribution of AQMSs, coverage of different types of development areas (e.g. urban areas, new towns and rural areas), distribution of local population, traffic flow and pollution sources, representativeness in terms of the local air quality, topography and meteorology in deciding the locations of the AQMSs. We made

reference to the United States Environmental Protection Agency's guidelines in deciding the locations, design and operation of individual AQMSs. The design and operation of our monitoring network also meet the international standards and is certified by the Hong Kong Laboratory Accreditation Scheme.

(c) AQOs review mechanism

The review will serve as an opportunity to take stock of the progress of air management strategy, as well as the latest technological developments, guidelines of WHO, international experiences and the prevailing local circumstances, in considering appropriate follow up actions regarding implementation of AQO. It is thus necessary to allow reasonable time for the relevant air quality improvement measures to take effect. In addition, given the complex and wide-ranging issues involved, a review frequency of every five years is appropriate. A similar review frequency has also been adopted in the United States.

When undertaking the review, we will fully consider all the relevant factors, including risks to health, technological feasibility, economic considerations and other relevant factors and local circumstances as advised by the WHO.

**(2) To elaborate the proposed AQO for fine suspended particulates (PM2.5) and its effects, particularly on the transport trades. To also advise the existing monitoring results on PM2.5.**

(a) Proposed AQOs for PM2.5

Our PM2.5 level has been under strong regional influence. It is worth noting that emissions of particulate of Hong Kong and the Pearl River Delta region are in the proportion of 1:99. Hong Kong and the Guangdong Provincial Government have already implemented various measures to improve regional air quality, and it takes time for the concentration of suspended particulates to improve progressively. The introduction of standard on fine suspended particulates (PM2.5) under the new AQO, pitched at the WHO IT-1 level, would serve as a starting point and will be subject to review in future.

(b) Impacts of the PM2.5 AQOs on transport trades

Since 1999, the Government has implemented a series of measures to reduce particulate emissions from vehicles (in particular PM 2.5). Key measures include the introduction of liquefied petroleum gas taxis and light buses, the progressive upgrading of the quality of motor vehicle diesel and the emission standards of newly registered vehicles, the mandatory retrofit of particulate removal devices in pre-Euro diesel vehicles and the strengthening of the smoke emission control for diesel vehicles. As a result, the particulate concentration at roadside (which comprises both PM 10 and PM 2.5) has been substantially reduced. EPD has been measuring PM 2.5 at the Central roadside station from 1999 to 2011, and a decline of 28% and 18 % for PM 2.5 and PM 10 respectively was observed during the period.

Looking ahead, to further reduce particulate emission, the Government will take forward the 22 air quality improvement measures. As for the regional front, we will continue to work with the Guangdong Provincial Government to reduce the emissions in the PRD region.

(c) Monitoring results of PM2.5

The monitoring results of PM2.5 of the 11 general and three roadside monitoring stations in 2011 are summarised in the following table.

2011 PM2.5 (ug/m <sup>3</sup> )		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Stations	Central / Western	--	--	--	--	--	--	--	--	--	--	31	52
	Eastern	45	38	40	36	26	13	15	18	28	31	27	43
	Kwai Chung	--	--	--	41	34	15	18	22	29	34	31	49
	Kwun Tong	--	--	--	42	30	17	20	23	32	34	30	46
	Sham Shui Po	--	--	--	--	--	--	--	--	33	34	30	46
	Tsuen Wan	48	42	46	40	30	18	21	23	33	35	32	50
	Sha Tin	--	--	--	--	--	--	--	--	--	--	30	50
	Tai Po	--	--	--	--	--	--	--	--	--	--	30	48
	Tung Chung	55	40	47	31	27	11	14	19	28	32	32	54
	Yuen Long	56	44	48	41	30	17	18	22	34	36	38	53
	Tap Mun	46	37	40	38	27	12	17	18	28	31	30	48
Roadside Stations	Causeway Bay	--	--	54	52	43	31	32	38	47	44	44	56
	Central	54	46	51	49	39	20	25	28	33	35	33	51
	Mong Kok	47	40	46	45	34	21	22	27	37	39	34	50

**(3) To set out in tabular form the average service life and estimated average age, sale prices, as well as licence fee of the pre-Euro, Euro I and Euro II diesel commercial vehicles still running on road. To**

**also advise the amount of remaining subsidy from the two incentive schemes to encourage early replacement of pre-Euro, Euro I and Euro II commercial diesel vehicles.**

The estimated average age of the serving pre-Euro, Euro I and Euro II diesel commercial vehicles is in Table 1. As vehicle owners are not required to notify the government when their vehicles retire from service, we do not have the statistics of the retirement age of these vehicles.

**Table 1. Average age of pre-Euro, Euro I and Euro II diesel commercial vehicles as at 31 December 2011**

Vehicle standards	Average age (Years)
Pre-Euro	19.6
Euro I	15.6
Euro II	12.7

Regarding the sale prices of old vehicles in Hong Kong, we do not have relevant information as the sales of second-hand vehicles are less transparent than that of new vehicles and the price of a second-hand vehicle may vary significantly in view of vehicle brand, age, mileage, ancillary installations, overall vehicle conditions, and any applicable sales promotion etc.

The fund approved for the pre-Euro and Euro I diesel commercial vehicle incentive scheme was \$3.2 billion. When the scheme was concluded in March 2010, about \$770 million were spent. For the on-going Euro II diesel commercial vehicle incentive scheme, about \$264 million (i.e. 49% of the allocated fund) was spent and about \$275 million are available for the eligible Euro II vehicle owners to apply for.

Vehicle licence fee is charged according to vehicle class. The annual vehicle licence fees as at June 2012 are set out at the **Annex**.

- (4) To provide a paper setting out the measures being contemplated by the Administration to substantially reduce the number of pre-Euro, Euro I and Euro II commercial diesel vehicles in Hong Kong. If increase in licence fee is one of the possible options, please advise the anticipated levels of licence fee which can achieve a deterrent effect. To also include in the paper the feasibility of buying out these polluting vehicles.**

We have been in discussion with stakeholders and relevant bureaux/

departments in mapping out the concerned measures. We will consult the Legislative Council on the proposals in due course.

- (5) To advise the progress of the setting up of low emission zones (LEZ), including the number of low-emission buses deployed to routes serving the pilot LEZ and the capability of franchised bus companies to meet the demand.**

In the 2010-11 Policy Address, the Chief Executive announced that the Government plans to designate pilot low-emission zones (LEZs) in busy districts such as Causeway Bay, Central and Mong Kok. We will increase as far as possible the ratio of low-emission franchised buses running in these zones from 2011, with the target of having only low-emission buses in these zones by 2015.

To this end, the Government has requested the relevant franchised bus companies to increase the number of low-emission buses (i.e. those meeting the emission level of a Euro IV or above) deployed to routes serving the pilot LEZs. As a result, the number of low-emission buses running in these zones has increased from about 240 in January 2011 to about 440 at end March 2012, an increase of about 80% over the period.

According to the franchised bus companies, about 2,400 buses would be required for the pilot LEZs in 2015. On the basis of their current bus replacement programmes, about 2,100 low-emission buses could be deployed to the pilot LEZs by 2015. Subject to satisfactory trial results, we would apply for funding to retrofit Euro II and III franchised buses with selective catalytic reduction (SCR) devices, which will upgrade their emission performance to Euro IV standards and higher. The retrofitted Euro II and III buses would be deployed to meet the target of implementing the pilot LEZs in 2015.

Regarding the progress of the trial of retrofitting Euro II and III franchised buses with SCRs, we will report the interim trial results to the Subcommittee on 27 June 2012 separately.

- (6) To advise if assistance would be provided to enable the continuation of the Fair Winds Charter which is expected to end on 31 December 2012. To also advise the progress of controlling emissions of ocean-going vessels at berth within PRD, particularly the discussion between Hong Kong and the relevant authorities in the Mainland.**

The Fair Winds Charter is a voluntary “fuel switch at berth” programme

initiated by some shipping lines to help reduce the emissions from ocean-going vessels (OGV). To encourage more OGV operators to join the voluntary fuel switch at berth in Hong Kong waters, the Financial Secretary proposed in the 2011-12 Budget Speech waiving half of port facilities and light dues for OGVs which switch to cleaner fuel when berthing in Hong Kong for three years.

We consulted trade on the implementation framework and sought support from Members of the EA panel on 28 May 2012. We plan to start the incentive scheme in July 2012.

Regional cooperation is essential to curb marine emission and to maintain the level playing field in Pearl River Delta (PRD) Region. We are in discussion with the relevant authorities in Guangdong, Shenzhen and Macao on the feasibility of mandating fuel switch at berth in PRD waters.

- (7) To provide a report on the discussion between the Administration and the Guangdong Provincial Government on the post-2010 arrangements for emission reduction in the PRD Region, including the names of the representatives from Hong Kong, the number of meetings held and the initial ideas on the post-2010 emission reduction targets.**

We are still in discussion with Guangdong Provincial Government on relevant arrangements and will report to the Legislative Council in due course.

**Environment Bureau/Environmental Protection Department  
June 2012**

## Annual Licence Fee of Commercial Vehicles

<b>Vehicle Licence (Traffic Accident Victims Assistance Fund Levy included)</b>	
<b>Vehicle Class</b>	<b>Annual Fee (HK\$)</b>
Goods Vehicle & Special Purpose Vehicle (other than Van-Type Light Goods Vehicle)	
Permitted gross vehicle weight:	
(a) not exceeding 1.9 tonnes	1,289
(b) exceeding 1.9 tonnes but not exceeding 5.5 tonnes	2,404
(c) exceeding 5.5 tonnes	4,694
Van-type Light Goods Vehicle	
Permitted gross vehicle weight:	
(a) not exceeding 1.9 tonnes	2,229
(b) exceeding 1.9 tonnes	4,254
Public Bus	
(a) for the driver; and	25
(b) additional fee for each seat for a passenger	50
Private Bus	
(a) for the driver; and	25
(b) additional fee for each seat for a passenger	45
Public Light Bus	8,429
Private Light Bus	2,749