

Appendix II

**Legislative Council
Panel on Environmental Affairs
Subcommittee on Improving Air Quality
Responses to the Follow-up Actions (Items (2), (4) to (7))
Arising from the Discussion at the Meeting on 27 June 2012**

Review of Air Quality Objectives

- (2) To provide a paper setting out the latest development of the post-2010 arrangements for emission reduction in the Pearl River Delta Region.**

To improve regional air quality, the Hong Kong Special Administrative Region (HKSAR) Government and the Guangdong Provincial Government reached a consensus in April 2002 to reduce, on a best endeavour basis, emissions of four major air pollutants, namely sulphur dioxide (SO₂), nitrogen oxides (NO_x), respirable suspended particulates (RSP) and volatile organic compounds (VOC), in the Pearl River Delta (PRD) region by 20% to 55% by 2010, using 1997 as the base year.

In August 2009, the two sides agreed to assess the progress of emission reduction in the two places in 2010, and to undertake a joint study to map out the emission reduction targets and plan for the next phase in the PRD region.

A science team had been set up by the two sides to conduct the joint study, and a number of technical meetings had been held to discuss the scope and coverage, methodology and timeframe of the study, as well as preliminary findings. The science team had also thoroughly assessed the emission reduction potentials of major pollution sectors in the region and that of various reduction measures, taking into account the air monitoring results of the PRD Regional Air Quality Monitoring Network and the effectiveness of emission reduction measures that had been implemented in the two places.

The science team reported the preliminary findings of the joint study to the Expert Group under the Hong Kong/Guangdong Joint Working Group on Sustainable Development and Environmental Protection, which is co-chaired by the Secretary for the Environment of HKSAR and the Director-General of the Department of Environmental Protection of Guangdong Province, with a view to facilitating the drawing up of objective and comprehensive reduction targets for the next phase.

The joint study and discussion between the two sides are in the final stage. Both sides agreed to continue to further reduce emissions in order to continuously improve the air quality of the PRD region. We expect that the emission reduction targets and plan of the four pollutants for 2015 and 2020, using 2010 as base year, would be promulgated shortly. We will report the outcomes to LegCo in due course.

- (4) To advise the number of existing pre-Euro, Euro I, and Euro II diesel commercial vehicles in Hong Kong, and the number of these vehicles which have been replaced under the two incentive schemes. To also advise the difficulties in putting forward disincentives (such as increasing the licence fees and frequency of annual inspection) to deter continued use of these vehicles.**

The numbers of pre-Euro, Euro I and Euro II diesel commercial vehicles as at end March 2012 are provided in the table below:

Vehicle Emission Design	No. of diesel commercial vehicles (as at end March 2012)
Pre-Euro	17,644
Euro I	12,735
Euro II	23,435
Total	53,814

Under the one-off grant scheme for the early replacement of pre-Euro and Euro I diesel commercial vehicles

launched between April 2007 and March 2010, about 11,300 and 5,800 pre-Euro and Euro I vehicles took part respectively and the take-up rate was about 30%. The current grant scheme for the replacement of Euro II diesel commercial vehicles started in July 2010 and will end in June 2013. About 3,300 vehicles took part so far which is about 12% of the eligible vehicles.

The response to the pre-Euro/Euro I one-off grant schemes to encourage vehicle owners showed that we need to have both incentives and disincentives to serve the purpose. We thus proposed at the Panel on Environmental Affairs meeting and its Subcommittee on Improving Air Quality meeting of the Legislative Council (LegCo) on 24 November 2008 and 10 March 2010, respectively, to increase the licence fee for aged commercial vehicles as a disincentive against their continued use. However, we had not got Member's support. In consideration of the need to phase out the heavily polluting vehicles to improve roadside air quality, we will, in consultation with stakeholders and the relevant bureaux/departments, map out measures for consulting the Legislative Council in due course.

- (5) To advise the impact of the setting up of low emission zones on other districts since the ratio of low-emission franchised buses running in the latter districts will be reduced.**

To improve air quality in busy corridors, our plan is for franchised bus companies to deploy low-emission buses (i.e. those meeting the emission level of a Euro IV or above bus) to routes cutting across the three pilot low emission zones (LEZs) at the busy corridors in Causeway Bay, Central and Mong Kok in 2015. Since these buses are also serving districts outside the pilot LEZs, these districts will also benefit from the cleaner buses running through them.

To fulfill the target of having only low-emission buses in the pilot LEZs by 2015, the relevant franchised bus companies will require about 2,400 buses. Retrofitting Euro II and III buses with selective catalytic reduction

(SCR) devices on a large scale will upgrade their emission level to Euro IV or above. This will help achieve the low-emission buses requirement together with the new environment-friendly buses to be procured. We are now working with the franchised bus companies to target to complete the retrofit by 2015 on a best endeavour basis.

Interim findings of the trial of retrofitting franchised buses with selective catalytic reduction devices

- (6) To advise the cost of the trial, the bus routes being serviced by the buses on trial, the anticipated funding in the event of a full-scale retrofit of the selective catalytic reduction (SCR) devices, and the parties (the Administration or the franchised bus companies) responsible for future replacement of SCR.**

The cost of the SCR trial being implemented for the six buses is about \$2.1 million. This covers the design, supply and installation of the SCR devices, as well as manpower support for conducting on-road emission tests and compilation of test reports. These trial buses are being deployed to routes running in urban areas and expressways to meet the daily operational needs.

For the proposed large-scale retrofit, the current estimate is that it may include up to 3,700 Euro II and Euro III franchised buses and the estimated cost is around \$555 million. A more detailed cost estimate will be made upon the completion of the trial. The Government will fully subsidise the franchised bus companies the capital cost of retrofitting Euro II and Euro III buses with SCR devices while the franchised bus companies shall be responsible for the subsequent operation, maintenance and repair (i.e. including the replacement of the worn-out catalyst) costs.

- (7) To provide an analysis on the cost-effectiveness between subsidizing the franchised bus companies to advance their bus replacement programme (say from the existing 18 years to 15 years) and the proposed full-scale retrofit.**

At present, the franchised bus companies are required to operate their franchised bus services with buses under the age of 18 years, and have been replacing their serving buses accordingly. This arrangement has taken account of the maintenance, operational and financial capability of the bus operators and their obligations to provide a proper and efficient service to the public. In accordance with this arrangement, it is estimated that over 3,000 buses will retire and be replaced between 2013 and 2017. When considering whether the bus replacement programme should be accelerated, we will have to take into account of the implications over cashflow and the related financial costs for franchised bus companies, delivery lead time and the potential impacts of bunching in orders may have on costs, operations and delivery schedules, etc.

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