

**Progress Report for
Air Quality Improvement Measures**

(I) Emission control for vehicles

1. Early Retirement of heavily polluting vehicles

Progress: We completed a subsidy scheme in March 2010 to encourage the early replacement of pre-Euro and Euro I diesel commercial vehicles. 17,000 vehicles took part in the scheme, representing about 30% of all eligible vehicles.

We launched another subsidy scheme for Euro II diesel commercial vehicles in July 2010. As at end April 2013, about 19% of the eligible owners took up the incentive and replaced their aged vehicles. We will seek additional provision from the Finance Committee (FC) in June to meet the increase in applications received. The scheme will end on 30 June 2013.

2. “Carrot and stick” approach to phase out pre-Euro IV diesel commercial vehicles

Progress: The Administration has proposed an incentive-cum-regulatory approach to progressively phase out some 86 000 pre-Euro IV diesel commercial vehicles. The proposal includes offering eligible vehicle owners an ex-gratia payment up to 30% of the taxable values of new vehicles and banning the renewal of licences for pre-Euro IV diesel commercial vehicles in phases, with pre-Euro II on 1 January 2016, Euro II on 1 January 2017 and Euro III on 1 January 2019. It also includes limiting the service life of newly registered diesel commercial vehicles to 15 years.

We reported to the LegCo Panel on Environmental Affairs (EA Panel) on the consultation feedback and sought its views on the proposal at its meeting on 20 May 2013. We are further discussing with the trade on the scheme and will seek Panel’s views on further development. Subject to the support of the LegCo, we aim to put it in place as soon as practicable.

3. Wider use of hybrid / electric vehicles or other environment-friendly vehicles

Progress: Government has launched incentive schemes through First Registration Tax (FRT) concession to encourage the use of electric vehicles (EVs), environment-friendly petrol private cars (including hybrid private cars)

and environment-friendly commercial vehicles. The First Registration Tax for EVs is waived till March 2014.

The Government has been taking the lead in using EVs and working with the private sector in developing the charging network. As at end April 2013, there are more than 440 EVs in Hong Kong, up from 74 in end 2010 and 242 in end 2011. 75 units of them are in the Government fleet. Another around 150 units will join the Government fleet later in 2013. There are already some 1 000 standard charging points and 10 quick chargers over the territory for public use.

With Government's full subsidy on the capital costs, the franchised bus companies have placed orders to procure the six hybrid buses and are making preparations to procure 36 electric buses for trial. We expect both trials to start in late 2014.

Government set up the \$300 million Pilot Green Transport Fund in March 2011 to encourage the transport sector to test out green and low-carbon transport technology (including hybrid/electric vehicles). Up to the end March 2013, 44 approved applicants commenced or were preparing the trials, which cover electric buses, goods vehicles and taxis, and hybrid light buses and goods vehicles, amounting to a total subsidy of about \$76 million.

4. Retrofitting Euro II and III franchised buses with selective catalytic reduction (SCR) devices to reduce their nitrogen oxides (NOx) emissions

Progress: EPD has completed a trial jointly with the franchised bus companies on retrofitting Euro II and III franchised buses with SCRs. Upon completion of data analysis, we will report the findings of the trial and the next steps to the EA Panel. Subject to satisfactory trial results and support of the EA Panel, we will seek funding approval from the FC to fund the franchised bus companies to retrofit SCRs on Euro II and III franchised buses.

5. Tightening the emission control regime on LPG and petrol vehicles through remote sensing equipment and dynamometer tests

Progress: EPD is conducting the tender assessment for the supply of replacement parts and replacement services for LPG and petrol vehicles and will make preparations to award the contracts to successful tenderers. We expect that the replacement scheme can commence in the second half of 2013 which would take about nine months to complete. Immediately after its completion, EPD will deploy roadside remote sensing equipment to catch those LPG or petrol vehicles emitting excessively and require their owners to rectify the excessive emission problem.

(II) Emission control for vessels

6. Tightening fuel standard for local vessels

Progress: In conjunction with the local marine trades, we completed in January 2013 a technical study on reducing the sulphur content cap from 0.5% to 0.05%. The study has confirmed the technical feasibility of tightening the sulphur content cap.

EPD reported the study findings and the outcome of the consultation for the tightening to the EA Panel in March 2013. We are finalizing details of the proposal and aim to complete the legislative exercise in the 2013-14 legislative session.

7. Mandatory fuel switch for ocean going vessels while at berth in Hong Kong waters

Progress: A 3-year incentive scheme was launched by EPD in September 2012 to reduce by half the port facilities and light dues of those ocean going vessels (OGVs) that switch to cleaner fuels with sulphur content not more than 0.5% while at berth in Hong Kong waters.

In parallel, EPD is consulting the relevant stakeholders on mandating the use of low-sulphur fuel for OGVs while at berth in Hong Kong waters. We aim to consult the EA Panel in July 2013. Our plan is to submit the legislative proposal in the 2013-14 legislative session following the completion of consultation.

8. Measures for government vessels to reduce nitrogen oxides emissions

Progress: Engine replacement is identified as a potential means to reduce nitrogen oxides emissions for vessels. EPD has selected one government vessel for a replacement trial to ascertain the technical feasibility, operability and maintainability. EPD is also conducting a cost-effectiveness evaluation of replacing high-polluting engines of the government fleet. The trial result will help chart the way forward for further reducing the emissions of government vessels. We will keep the EA Panel informed of the development.

9. Installation of on-shore power facilities at Kai Tak Cruise Terminal

Progress: The Kai Tak Cruise Terminal has reserved space for the installation of on-shore power facilities. EPD will commission the Electrical and Mechanical Services Department to carry out a study to

formulate an implementation strategy on the installation and operation of the on-shore power facilities having regard to the relevant international standards and the management arrangements of the Terminal. We aim to complete the study by mid-2014. The Government will seek funding from the FC for the installation of on-shore power (OPS) facilities at the new cruise terminal so that cruise vessels with onboard OPS facilities can further reduce their emission when berthing.

(III) Emission control for power plants and other operations

10. Increasing the ratio of natural gas in local electricity generation

Progress: We have continued to tighten the statutory emission caps on the power plants with effect from 2017 under the Third Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences. In order to meet the progressively tightened emission caps, the electricity companies have to use more natural gas for power generation and retrofitted flue gas desulphurization and NO_x control equipment to their major coal-fired generation units in phases between 2009 and 2011. They are also using more low emission coal whenever possible. We will continue to examine the scope for further tightening the emission caps in the light of the future fuel mix for the power sector and advancement in emission control technologies.

11. Imposing emission control for non-road mobile machinery

Progress: We aim to complete the legislative exercise for implementing a new emission control regime for new non-road mobile machinery to be imported for sale, lease or supply for local use in the 2013-14 legislative session.

12. Electrification of aviation ground support equipment

Progress: There are currently about 300 units of ground support equipment (GSE) and vehicles running on electricity at the Hong Kong International Airport. To facilitate the use of electric GSEs and vehicles in the coming years, the Airport Authority has installed additional electric charging stations and put in place new vehicle purchase policy which favours the use of electric vehicles. The pace of GSE replacement would depend on factors such as the availability of electric alternatives, age and maintenance conditions of the GSE fleet, the financial position of operators and the business outlook.

13. Strengthening volatile organic compounds control

Progress: The new statutory volatile organic compound content requirements of 14 types of vehicle refinishing paint, 36 types of vessel paint and pleasure craft paint and 47 types of adhesives and sealants have been implemented in phases with effect from 1 January 2010. The last phase came into operation on 1 April 2012.

(IV) Road traffic-related measures

14. Low emission zones

Progress: We plan to set up pilot low emission zones (LEZ) at the busy corridors in Causeway Bay, Central and Mong Kok, under which only low-emission franchised buses (i.e. those meeting the emission level of a Euro IV or above bus) will be deployed in these zones by 2015. Starting from 2011, the franchised bus companies have accorded priority to the deployment of low-emission buses to routes serving the pilot LEZs as far as possible. As at end March 2013, around 27% of buses (about 590 buses) deployed to routes serving these LEZs are low-emission buses.

15. Car-free zone / pedestrianization scheme

Progress: Till March 2013, there are seven full-time pedestrian schemes, some 30 part-time pedestrian schemes and over 40 traffic calming streets in Hong Kong. The introduction of further pedestrian streets will be increasingly challenging due to limited road space against competing needs and street management considerations.

Transport Department (TD)'s previous consultations with District Councils (DCs) showed that they have hesitations in further expanding the current pedestrianization scheme. Some DC members, however, are receptive to the option of adjusting the operation hours of the existing pedestrian streets to maximize the benefits of the scheme.

16. Bus route rationalization

Progress: TD, underpinned by EPD, has started to consult the DCs on the 2013-14 Route Development Programmes. TD will continue to consult DCs in taking forward the route rationalization proposals, and meet their concerns and requests as appropriate.

Also, TD and the franchised bus companies are taking forward route rationalization through an "area approach", under which the entire

district/region is used as the basis for rationalizing bus routes. As a start, TD and the bus companies have started consulting the North DC in early 2013 for target implementation of the proposed route rationalization plan in around mid-2013.

TD will also pursue vigorously rationalization plans of franchised buses and other road-based transport modes as and when new railway lines are commissioned (e.g. the commission of the West Island Line in 2014 and South Island Line (East) in 2015).

(V) Infrastructure development and planning

17. Expand rail network

Progress: Construction works have commenced for the West Island Line, Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, South Island Line (East), Kwun Tong Line Extension and Shatin to Central Link.

18. Develop cycle tracks in new development areas

Progress: The Government has been promoting the use of public transport system as the main transport mode and encouraging the public to make use of the highly efficient mass transit transport systems and other public transport services. Due to safety considerations, the Government does not encourage the public to use bicycle as a transport mode in urban areas. New towns in the New Territories or new development areas, where traffic density is relatively low, have better conditions for using bicycle for short-distance travel. The Civil Engineering and Development Department is taking forward the development of a cycle track network in the New Territories by phased interconnection of the cycle tracks in various new towns between Ma On Shan, Sheung Shui, Yuen Long, Tuen Mun and Tsuen Wan. It is expected that the Sheung Shui – Ma On Shan section will be completed in 2013. For existing cycling facilities in new towns, TD commissioned a consultancy in May 2010 to carry out a study to examine measures to improve the existing cycle track networks and bicycle parking facilities. The study has been substantially completed in early 2013.

(VI) Energy efficiency measures

19. Mandatory implementation of the Building Energy Codes

Progress: The Buildings Energy Efficiency Ordinance took effect on 21 September 2012. We will continue to keep under review

technological developments and tighten the efficiency standards where appropriate.

20. Review of Coverage of and Grading Standards under the Mandatory Energy Efficiency Labelling Scheme

Progress: The Energy Efficiency (Labelling of Products) Ordinance currently covers compact fluorescent lamps, air-conditioning units, refrigerators, dehumidifiers and washing machines. We will review the grading structure and product coverage of the Mandatory Energy Efficiency Labelling Scheme with a view to facilitating consumers to choose more energy-efficient electrical products.

21. Light-emitting diode or equivalent alternatives for traffic signal / street lighting

Progress: Replacement of all conventional traffic signal at about 1 800 road junctions with light-emitting diode (LED) light was completed by end 2012.

Trial schemes of LED street lights for minor roads and light tubes at roadside and on footbridges are in progress to assess their cost and benefit as well as their suitability in Hong Kong's outdoor environment. Their performance and cost-effectiveness will be reviewed after completion of the trial in 2013.

22. Tree planting / roof-top greening

Progress: Government has been promoting active planting and new greening technologies such as skyscraper greening (roof greening and vertical greening) for government premises.

Development Bureau will continue to formulate and promulgate standards, guidelines and best practices related to greening, landscape planning and design and tree management. It will also carry out public education and community involvement activities to enhance public awareness of greening, landscape and tree management issues.

23. District cooling system for Kai Tak Development

Progress: Construction works for Phase I of the district cooling system for Kai Tak Development had been completed and the construction works for Phase II is underway. District cooling services have been provided to the Kai Tak Cruise Terminal since Feb 2013. For Phase III (Package A) works, we plan to seek funding approval from the PWSC and the FC in May and June 2013 respectively. The

programme of the remaining works under Phase III will be subject to the progress and development programme of the Kai Tak Development.

(VII) Regional collaboration

24. Collaboration with PRD governments in requiring ocean-going vessels to switch to cleaner fuels while berthing at PRD ports and set up an Emission Control Area in PRD waters over the longer term

Progress: We are exploring with the Guangdong Government to jointly introduce fuel switch at berth at ports in the Pearl River Delta (PRD) region for maximizing the environmental benefits. The designation of Emission Control Area in the PRD waters is our long term goal as it involves agreement from the Central People's Government and other stakeholders. Detailed studies and assessments are required before we proceed on this basis.

25. Collaboration with Guangdong authorities on achieving 2015 and 2020 emission reduction targets

Progress: In November 2012, the Hong Kong Special Administrative Region and Guangdong Provincial Governments jointly announced new sets of regional emission reduction targets/ranges in respect of four key air pollutants for 2015 and 2020 respectively. Both sides will implement additional emission reduction measures for bringing continuous improvement to the regional air quality.

Environmental Protection Department
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