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For information

**Progress of Measures Taken by
Hong Kong and Guangdong to Improve Air Quality**

Purpose

This paper informs the Members on the progress of measures taken by Hong Kong and Guangdong to improve air quality.

Background

2. To improve regional air quality, the HKSAR Government reached a consensus with the Guangdong Provincial Government in April 2002 to reduce, on a best endeavours basis, the emission of four major air pollutants, namely sulphur dioxide, nitrogen oxides (NO_x), respirable suspended particulates and volatile organic compounds (VOC) by 40%, 20%, 55% and 55% respectively in the region by 2010, using 1997 as the base year. Achieving these targets will not only enable Hong Kong to meet its air quality objectives but also significantly improve the air quality of the Pearl River Delta (PRD) and relieve the regional smog problem.

3. In December 2003, the two governments jointly drew up the PRD Regional Air Quality Management Plan with a view to meeting the above emission reduction targets. The PRD Air Quality Management and Monitoring Special Panel (the Special Panel) was also set up under the Hong Kong/Guangdong Joint Working Group on Sustainable Development and Environmental Protection to follow up the tasks under the Management Plan.

Progress of Measures

4. The HKSAR and the Guangdong Provincial Governments have

been working together on all fronts to implement various reduction measures under the Management Plan. Much has been achieved in the past year.

5. The PRD Regional Air Quality Monitoring Network, an initiative of the two sides, was commissioned on 30 November 2005. The public now has access to the PRD Regional Air Quality Index, which is an objective indicator of air quality in the region. Apart from showing the air quality situation, it facilitates understanding of the effectiveness of the reduction measures and formulation of more effective strategies.

6. On Hong Kong side, we have introduced a comprehensive package of measures to address vehicle emissions, emissions from power plants and VOC. Compared with 1999, roadside concentration of particulates and NO_x have come down by 14% and 17% in 2005. Emission caps have been imposed on the two local power companies. In overall terms, the number of days and hours with API exceeding 100 was reduced from 87 days and 1,250 hours in 2004 to 49 days and 485 hours in 2005. The Government continues to encourage vehicle owners to acquire vehicles of lower emissions such as those of Euro IV emission standards which are now mandatory for newly registered vehicles in phases in 2006. Compared with Euro I, this new standard will slash emissions of particulates and NO_x by 90% and 50% respectively.

7. Guangdong has had much progress in reducing emissions of sulphur dioxide and using natural gas for power generation. Large coal-fired power plants of about 6,300 MW have been retrofitted with flue-gas desulphurisation systems. These are capable of reducing sulphur dioxide emissions by 150,000 tonnes per year. Guangdong plans to complete, by 2008, the retrofitting works at all coal-fired plants of 125 MW or above. The target is to reduce emissions by over 400,000 tonnes each year by 2010. A new policy has been introduced since July 2006 giving power plants with flue-gas desulphurisation systems a cash incentive of 1.5 cents per unit when electricity is sold to the power grid. Guangdong is moving ahead in using cleaner fuel to generate electricity. Two power plants - Zhongshan Hengmen and Zhuhai Hongwan - have been using natural gas since February. Phase I of the Guangdong liquefied natural gas (LNG) project was completed in June. Four LNG power plants located at Huizhou, Guangzhou and Shenzhen are expected to be commissioned in phases this year, reducing Guangdong's reliance on highly polluting fuel.

Way Forward

8. Building on these achievements, Hong Kong and Guangdong, at the Ninth Plenary Session of the Hong Kong/Guangdong Co-operation Joint Conference held on 2 August 2006, reconfirmed their determination to achieve the agreed emission reduction targets by 2010 to improve regional air quality. At the meeting, the two sides recognised the achievements made in the past few years and agreed to continue working closely to implement a series of specific measures aiming to fulfill the above commitment.

9. On the Emission Trading Pilot Scheme for Thermal Power Plants in the PRD Region, the Ninth Plenary Session noted that the Special Panel had completed an implementation framework for the pilot scheme. The target is that the implementation framework will be presented to prospective participating power plants this year. The pilot scheme seeks to provide a platform for the power plants in the PRD Region to engage in emission trading, a cost-effective means to achieve emission reduction targets. Whether to join the pilot scheme or not is a commercial decision. The environmental protection authorities of the two sides will take up a monitoring role to ensure the smooth operation of the pilot scheme.

10. In addition, both sides will announce in October 2006 the first half-yearly report on the monitoring results of the PRD Regional Air Quality Monitoring Network. Each of the two governments will implement measures respectively. Measures to be or being taken by the Guangdong Province include -

- (a) Guangdong will not plan for construction of new coal-fired or oil-fired power plants in the PRD region;
- (b) LNG is being introduced for power generation;
- (c) Guangdong will proceed with the retrofitting of flue-gas desulphurisation systems at existing power plants. It will strive to complete the relevant major works for large-scale generation units by 2008;
- (d) Guangdong will speed up the introduction of National III motor vehicle emission standards (on a par with Euro III standards) in Shenzhen. Guangzhou has implemented this measure since 1 September 2006;

- (e) leaded petrol will continue to be banned; and
 - (f) a pilot project will be implemented at Shenzhen to install vapour recovery systems at oil depots and petrol-filling stations to further control emissions of VOC effectively.
11. Hong Kong will adopt the following measures -
- (a) introducing Euro IV motor vehicle emission standards for newly registered vehicles in phases in 2006;
 - (b) asking power companies to carry out measures to reduce emissions and to increase the use of natural gas for power generation; and
 - (c) continuing to impose caps on the total emissions of power companies and building in measures in the post-2008 Scheme of Control; and
 - (d) completing the drafting of a new regulation for controlling VOC emissions for introduction into the Legislative Council in 2006.

Environmental Protection Department
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