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Panel on Environmental Affairs

Subcommittee on Improving Air Quality

Meeting on 13 January 2009

Background brief on the
Pearl River Delta Regional Air Quality Management Plan

Purpose

This paper sets out the Pearl River Delta Regional Air Quality Management Plan, and gives a brief account of the views and concerns expressed by the Panel on Environmental Affairs (the Panel).

Introduction

2. Air quality in Hong Kong is typical of any large modern city. High concentrations of particulates and nitrogen oxides (NO_x) in the urban areas are the most pressing problems, causing a nuisance and constituting a health concern. The problems are compounded by a combination of factors, including high population density, high-rise buildings that hinder or prevent circulation of air at street level, and a high concentration of vehicles, especially diesel vehicles, at urban roadside, as well as ambient air pollution in the Pearl River Delta (PRD) Region.

Pearl River Delta Regional Air Quality Management Plan

3. To improve the air quality of the whole PRD Region, the Environmental Protection Department and the Environmental Protection Bureau of Guangdong conducted a joint study on regional air quality during 1999-2002. The aim of the study is to analyze the relative significance of different industrial and commercial sources of pollution and their direct and indirect impacts on regional air quality so that air pollution measures can be prioritized accordingly. According to the findings of the study, the economy, population, electricity demand and vehicle mileage in the PRD Region will grow by 150%, 20%, 130% and 180% respectively from 1997 to 2010. In terms of total emissions, Hong Kong accounts for about 5% to 20% of regional air pollution while the PRD Economic Zone of the Mainland accounts for

80% to 95%. Given the continuous economic growth of the PRD Region, the extensive pollution in the region cannot be mitigated effectively with the existing improvement measures implemented by the two governments. To this end, the Hong Kong Special Administrative Region Government (HKSARG) and the Guangdong Provincial Government (GPG) reached a consensus in April 2002 to reduce by 2010, on a best endeavour basis, the regional emissions of sulphur dioxide, NO_x, respirable suspended particulates and volatile organic compounds by 40%, 20%, 55% and 55% respectively, using 1997 as the base year. In December 2003, the two governments jointly drew up the Pearl River Delta Regional Air Quality Management Plan (the Management Plan) with a view to meeting the emission reduction targets. The Pearl River Delta Air Quality Management and Monitoring Special Panel (Special Panel) was also set up under the Hong Kong/Guangdong Joint Working Group on Sustainable Development and Environmental Protection to follow up on the tasks under the Management Plan.

Deliberations by the Panel

4. The Panel has been closely monitoring the progress in mitigating regional air pollution. Members agree that the problem cannot be resolved by HKSARG alone since the air quality of Hong Kong was increasingly affected by the rapid economic and industrial development in the PRD Region. They are also not optimistic that the emission reduction targets can be met because many industrial activities in the Mainland do not abide by the environmental laws. As such, members consider it necessary for the Special Panel to discharge its duty to follow up on the tasks under the Management Plan. The Administration should also explain to the public the bases upon which the emission reductions targets were arrived at and the means to achieve these targets. More scientific methods, such as satellite mapping and remote sensing, should be used to forecast pollution and to trace the pollution sources more accurately to enhance control.

5. In January 2008, the Panel received a briefing on the Mid-term Review of the Management Plan, which revealed that the economy, population, electricity consumption and vehicle mileage in the PRD Economic Zone would increase by 509%, 56%, 158% and 319% respectively in 2010 as compared to the 1997 levels, far exceeding the assumptions in 2002. While the findings suggested that Hong Kong was on track to achieve the 2010 emission reduction targets, there was a need for the Guangdong side to introduce additional measures to meet the targets. The latest progress of the enhanced measures taken by HKSARG and GPG under the Management Plan are given in **Appendices I and II** respectively while the additional control measures recommended for the PRD Economic Zone is in **Appendix III**. To keep track of the progress of achievement of the 2010 emission reduction targets, members considered it necessary for both sides to provide six-monthly reports to the Panel.

Council Business Division 1
Legislative Council Secretariat
9 January 2009

Appendix I

Pearl River Delta Regional Air Quality Management Plan
Enhanced Control Measures of the HKSAR

Measures	**Implementation Programme**	**Progress (Up to 30.11.2007)**
Encourage the replacement of diesel light buses with ones using clean fuel (already commenced)	Since 2002, the Government has offered incentives to diesel light bus owners to encourage replacement of diesel light buses with liquefied petroleum gas (LPG) or electric ones.	The incentive scheme was introduced in August 2002 and completed by 31 December 2005. As at end November 2007, there were over 2,484 public LPG light buses, accounting for 57.1% of the entire public light bus fleet.
Require the retrofitting of particulate removal devices on pre-Euro diesel vehicles (already commenced)	Since 2002, financial assistance has been provided for retrofitting pre-Euro heavy diesel vehicles with particulate removal devices.	Financial assistance was provided in phases from December 2002 to December 2005 to retrofit pre-Euro heavy diesel vehicles with catalytic converters. All together, about 36 500 eligible vehicles were installed with catalytic converters. Since April 2006, all pre-Euro heavy diesel vehicles (including franchised buses), except long-idling ones were required to be installed with approved emission reduction devices. Since April 2007, pre-Euro heavy diesel vehicles which operate under long idling situations (including lorries with cranes mounted, concrete mixers, pressure tankers and gully emptiers) also have to install approved emission reduction devices.
Encourage vehicle owners to replace pre-Euro and Euro I commercial diesel vehicles with Euro IV models	A financial incentive scheme was introduced in the second quarter of 2007.	Since 1 April 2007, the Government offers a time-limited one-off grant to vehicle owners to encourage the early replacement of pre-Euro and Euro I diesel commercial vehicles with new ones which comply with the statutory emission standards for newly registered vehicles (which is now the Euro IV emission standards). A total of 2,892 applications have been approved (as at end November 2007).
Encourage members of the	With effect from 1 April 2007, a 30% reduction in	Since 1 April 2007, a reduction in the First Registration Tax is applied to the purchase of environment-friendly private petrol vehicles.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
public to use environmentally friendly petrol private vehicles	the First Registration Tax was offered, subject to a cap of $50,000 per vehicle.	A total of 2,800 environment-friendly private petrol vehicles were covered under the scheme (as at end November 2007).
Require drivers to switch off idling vehicles with running engines	(New item included in December 2007) To consult the public on the proposal to introduce a statutory ban on running vehicle engines while waiting.	We launched the public consultation on 2 November 2007 which would end on 31 March 2008. We will take into account of all the views received before finalizing the proposal.
Strengthen the control of emissions from petrol and LPG vehicles	(New item included in December 2007) To consult stakeholders on proposals to strengthen the control of emissions, including the use of roadside remote sensing device and chassis dynamometer for emission testing.	We are in the process of finalizing the consultation paper which will be published in early 2008.
Enhance the vapour recovery systems in petrol filling stations	The Air Pollution Control (Petrol Filling Stations) (Vapour Recovery) Regulation was amended in 2004 to require the recovery of petrol vapour emitted during vehicle refuelling at petrol filling stations, with effect from 31 March 2005.	Since 31 March 2005, all newly built petrol filling stations have to be installed with vapour recovery systems. Also, all existing stations are required to be retrofitted with the system by 31 March 2008.
Tighten motor fuel standard	Motor fuel standard were tightened to Euro IV standard by 2005 (motor diesel standard has already been tightened to Euro IV	Euro IV petrol standard came into effect on 1 January 2005.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	standard since 2002).	
	(New item included in December 2007) To introduce the supply of motor vehicle fuels meeting the Euro V standard.	The duty rate for Euro V motor vehicle diesel would be reduced to $0.56 per litre starting 1 December 2007 for a period of two years so as to encourage the early supply of more environment-friendly fuel on the local market.
Tighten the emission standard for newly registered vehicles	Euro IV emission standard was adopted since 2006.	Euro IV emission standard was introduced on 1 January 2007 for all newly registered vehicles.
	To be in line with EU in adopting Euro V motor vehicles standard for tailpipe emissions.	Planned to adopt Euro V standard for tailpipe emissions from heavy-duty vehicles exceeding 3.5 tonnes on 1 October 2009, in tandem with EU.
Use of cleaner fuels by ferries	(New item included in December 2007) To look into the use of cleaner fuels by ferries.	We have set up a working group comprising relevant bureaux/departments to look into the use of cleaner fuels by ferries. The working group will consider, inter alia, inviting ferry operators to conduct a trial of using cleaner fuels in ferries. Subject to the findings, we would draw up possible options to encourage ferry operators to switch to using cleaner fuels.
Reduce VOC emissions from the printing process, paints and consumer products	To introduce legislation in 2004 or 2005 to require the labeling of VOC content on VOC products.	Since 1 April 2007, the Government has enforced the new Regulation in phases to restrict the VOC content of architectural paints/coatings, printing inks and six major types of selected consumer products (i.e. air fresheners, hairsprays, multi-purpose lubricants, floor wax strippers, insecticides and insect repellents). Lithographic heatset printing machines are also required to be installed with emission control devices from 1 January 2009.
	Legislation will then be introduced in phases to reduce the use of products with high VOC contents and to impose emission standards for the printing process.	

Measures	**Implementation Programme**	**Progress (Up to 30.11.2007)**
Reduce emissions from power stations	Effective and flexible mechanisms (which may include emission trading) will be set up to control the total emissions of SO_2, NOx and RSP from power stations to achieve respective reduction targets by 2010.	The Government approved the emission reduction options set out in the financial plans of the two power companies in June 2005. CLP Power Hong Kong Limited (CLP) will provide desulphurization and denitrification systems for four of its coal-fired generating units each of 677MW. Hong Kong Electric Co. Ltd. (HEC) will provide low-NOx burners and desulphurization systems for two of its coal-fired generating units each of 350MW. CLP has been increasing the use of ultra low sulphur coal and is seeking to increase natural gas supply through the development of liquefied natural gas reception facilities. HEC had commissioned its first natural gas generation unit of 335MW in October 2006. The first commercial scale wind turbine power generation unit of 800kW was also commissioned in Hong Kong in February 2006.
	Control total emissions from power plants.	Emission caps have been included in the Special Process Licences (SPLs) granted to CLP's Castle Peak Power Station, Black Point Power Station and Penny's Bay Power Station as well as HEC's Lamma Power Station. Emission caps will gradually be tightened with a view to reducing emissions to the practical minimum and achieving the 2010 reduction targets. The Air Pollution Control Ordinance is being amended to facilitate the power companies to conduct emissions trading, and to specify the emission caps for the power companies in 2010 and beyond.
Reduce emissions from industrial and commercial processes	(New item included in December 2007) To mandate the use of ultra-low sulphur diesel (ULSD) in industrial and	We have consulted the trades on the proposal for mandating the use of ULSD in all industrial and commercial processes. We aim to introduce the necessary legislative amendments to effect the proposal in the first half of 2008.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	commercial processes.	
Enhance energy efficiency of buildings	(New item included in December 2007) To consult the public on the proposal to mandate compliance with the Building Energy Codes (BEC).	The Administration launched a three-month public consultation on the proposal to introduce mandatory implementation of the BECs on 28 December 2007.
Energy Efficiency Labelling Scheme	(New item included in December 2007) To take the Energy Efficiency (Labelling of Products) Bill through the legislative process.	We aim to launch the first phase of the mandatory Energy Efficiency Labelling Scheme within 2008. We will also plan for the second phase of the mandatory scheme with a view to gradually applying the mandatory requirement to more products.
Encourage to adopt cleaner production technologies and processes	(New item included in December 2007) A five-year programme to be launched to give professional and technical support to Hong Kong-owned factories in the Pearl River Delta Region to adopt cleaner production technologies and practices.	We have consulted industry associations on the proposal and secured support from Finance Committee for funding this initiative.

Appendix II

Pearl River Delta Regional Air Quality Management Plan
Enhanced Control Measures of the Guangdong Provincial Government

Measures	**Implementation Programme**	**Progress (Up to 30.11.2007)**
Use cleaner energy	To reduce gradually the energy consumption per 10,000 Yuan GDP. To establish by 2010 a diversified energy production and supply system that is safe, stable, economical, efficient and clean.	The energy consumption per 10,000 Yuan GDP of Guangdong for 2006 was 0.771 tons of standard coal equivalent, which was a decrease of 2.93% as compared with that in 2005. The energy consumption per 10,000 Yuan GDP is expected to decrease by 13% in 2010 (as compared with 2005 level). To reduce reliance on more polluting fuel like coal and oil, Guangdong is developing two new natural gas projects apart from the Guangdong Liquefied Natural Gas (LNG) Project – (a) CNOOC Zhuhai Natural Gas Pipeline Project, with a capacity of about 1.19 million tonnes/year, utilizes natural gas from the South China Sea since February 2006; and (b) Zhuhai LNG Receiving Station Project, with a capacity of 3 million tonnes/year for Phase I, is expected to be commissioned partially by 2010. The power plants that have been converted to the use of natural gas as fuel include Zhongshan Hengmen Power Plant, Zhuhai Hongwan Power Plant (since February 2006) and Shenzhen Nanshan Power Plant (since April 2007).

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To construct natural gas trunk pipeline and the associated works. To complete Phase I in 2005 that will have a capacity of 3 million tonnes/year. In 2009, to complete Phase II that will increase the total capacity to 6 million tonnes/year and finish construction of a number of natural gas power plants.	The capacity of Guangdong LNG Project Phase I has been expanded from 3 million tonnes/year to 3.7 million tonnes/year and gas supply was started in mid 2006. The total capacity for Phase II will be expanded to 7 million tonnes per year. Four newly built natural gas power plants (with a total of 11 generating units) have all been commissioned in 2006 and 2007. Residents in Shenzhen, Guangzhou, Dongguan and Foshan can also use natural gas supplied through pipeline network.
	To improve by 2005 the 500KV dual circuit annular core transmission grid to ensure transmission of electricity from western provinces.	The 5 AC and 3 DC main transmission channels from western provinces have been completed.
	To rationalize the distribution of new power stations. Apart from proper construction of generating units for combined heat and power supply and those thermal power plant projects which have been reported to the State for planning and building, no more new coal-fired and oil-fired power plants will be planned for building in the PRD region.	Being implemented.
	To gradually enlarge the scale of electricity transmission from western provinces to Guangdong.	Being implemented.
Control the sulphur content of fuel	To control the use of high sulphur fuel (sulphur content of coal and fuel oil should be below 0.8% in the acid rain control zone by 2005).	Being implemented. By 2010, enterprises which have not installed desulphurization system would have their fuel sulphur content controlled at below 0.7% for coal and below 0.8% for fuel oil. Those not meeting the limits would need to use sulphur fixing agents or sulphur removal agents.

Measures	**Implementation Programme**	**Progress (Up to 30.11.2007)**
Reduce emissions from coal-fired and oil-fired power stations	To phase out small-scale thermal power generating units. Power plants with a capacity equal or above 300MW to account for over 70% of the total installed capacity in the region in 2005, which is 35% higher than that in 2000.	The Guangdong Provincial Government announced its plan in March 2007 to close down small thermal power generating units with a total capacity of 9 660MW in the Province by the end of 2010, including those with a total capacity of about 7 100 MW in the PRD Economic Zone [Units of about 1600 MW to be closed down in 2007, 3 600 MW in 2008 and 1 900 MW in 2009 (see Annex C).]
	To install flue gas desulphurization systems at the power plants in Shajiao, Huangpu, Taishan and Zhuhai by 2005.	Flue gas desulphurization systems have already been installed (including works pending official check and acceptance) for generating units with a capacity of around 14 200 MW, thereby reducing the annual SO_2 emission by more than 300 000 tonnes. In addition, generating units of around 1 000 MW are being retrofitted with this system.
	To require all oil-fired and coal-fired generating units of capacity above 125MW to be equipped with flue gas desulphurization systems by 2007.	
	To require all coal-fired and oil-fired power plants to adopt low-NOx combustion technologies in case of alteration or expansion.	Low-NO_X combustion technologies have already been required at all units in case of alteration or expansion.
	(New item included in December 2007) To require all coal-fired and oil-fired power plants under construction, alteration or expansion to install flue gas denitrification systems.	
	To promote the installation of low-NOx combustion device at existing coal-fired and oil-fired power plants.	Being implemented.
	(New item included in December 2007) To study the feasibility of installing flue gas denitrification systems for existing power plants.	

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To require all power plants under construction, alteration or expansion to install flue gas desulphurization equipment, particulate removal devices and automatic continuous emissions monitoring system.	Being implemented.
	To enhance technological improvements of existing power plants and to implement cleaner production. Newly built power plants have to meet the advanced standard on cleaner production in the country.	Being implemented.
	To materialize the subsidization policy for thermal power plants to desulphurize by giving concessions, support and assistance in land acquisition for desulphurization systems and import of essential equipment so as to facilitate the full implementation of desulphurization projects.	From 1 July 2006, power plants with desulphurization system receive an extra RMB 1.5 cents per unit when the electricity is sold to the power grid.
	To establish a province-wide quota administration system for total emissions of sulphur dioxide and to study the emissions trading mechanism of sulphur dioxide.	Being implemented.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
Control emissions from industrial boilers and industrial processes	To phase out coal-fired boilers with a capacity of less than 2 tonnes/hour in the urban areas of cities. By 2005, to stop using such coal-fired boilers in build-up areas of key cities. To require all large and medium-size industrial boilers to install desulphurization systems or adopt clean combustion technologies to reduce emissions.	The operation of coal-fired boilers of less than 2 tonnes/hour has been largely phased out in the urban areas of cities in the region. Removal devices for particulates must be installed onto all industrial boilers. Restaurants located in sensitive areas and restaurants the operation of which would seriously affect public production must be installed with devices to purify cooking fumes. <u>Guangzhou</u> In 2006, 8,532 catering businesses had switched to clean energy uses; 4,371 had installed fumes abatement facilities. The use of clean energy by large catering businesses in the developed urban area had reached 94.13%.
	To continue phasing out various production technologies and installations that have caused serious pollution by emitting sulphur dioxide, smoke and particulates.	To implement on a mandatory basis a system to phase out enterprises, various production technologies and installations that have caused serious pollution. No construction of new cement plants and extension of cement plants will be planned in the PRD Region. Future development will focus on projects of new dry-type cement plant with daily production capacity of more than 4 000 tonnes. Projects of new dry-type rotary kiln cement plant with daily capacity of 2 500 tonnes and below will be prohibited. Programmes are being implemented to phase out high energy consuming and highly polluting cement plants, production lines of vertical kilns, dry hollow kilns, Lepol kilns and wet process kilns. The relocation project of Guangzhou Cement Plant, completed by end 2005, was estimated to reduce particulate emissions in the Region by approximately 3 000 tonnes/year. Some cement production units located in Sanshui area in Foshan City will be close down by the end of 2007. All existing vertical kiln cement production units will be closed down by September 2008.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To actively study the technologies for controlling emission of nitrogen oxides from stationary sources such as power plant boilers, industrial boilers and restaurant boiling water furnaces.	Emission of nitrogen oxides from stationary sources such as electricity station boilers, industrial boilers and restaurant boiling water furnaces will be under control in 2010.
	Location and planning of industries causing serious pollution will be strictly determined and administered centrally. The system of environmental assessment of construction projects will be enhanced.	Being implemented.
	For industrial sectors such as petrochemicals, steel, non-metallic mineral products, paper and paper products, textile and dyeing, technological improvement at existing enterprises will be enhanced and cleaner production will be implemented. New projects have to meet the advanced standard on cleaner production in the country.	Being implemented.
	(Item amended in December 2007) Initiate tasks for vapour recovery at petrol filling stations, tanker trucks and oil depots.To fully implement motor fuel vapour emission standard for all oil depots, tanker trucks and petrol filling stations.	Planned to implement the vapour emission standards for all oil depots, tanker trucks and petrol filling stations in the cities of the PRD Region from 1 January 2010.
Reduce the emission of VOC from paints	To replace by 2003 paints using VOCs with xylene as the main solvent.	Since 1 January 2006, all water-based paints and adhesives are required to comply with the technical requirement of environmentally friendly products. All water-based paints and adhesives bearing an environmentally friendly label have to comply with the VOC content limit. Work completed.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	(New item included in December 2007) To explore the feasibility of imposing limits on the VOC content of paint products.	
Reduce tailpipe emissions from motor vehicles	To commence the construction of a regional rapid light-rail system by 2005. To construct expressways in major cities, such as the district expressway in Southern Guangzhou and the Shenzhen-Shenping Express Trunk Road.	Phase I of Shenzhen-Shenping Express has been commissioned. Rail system between Guangzhou and Zhuhai started construction in December 2005. The system, 144km in length with a maximum speed of 200km/hr, is expected to be completed by 2009.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To develop green transport by implementing clean vehicle action programmes in major cities of the region. To encourage the use of clean fuels, develop electric vehicles, actively promote the use of advanced clean fuel motor vehicles and step up the development of public transport.	<u>Shenzhen</u> - Formulated the "Medium to Long Term Planning for the Development of Clean Vehicles in Shenzhen". - Drew up and implemented the 2003-2008 general work programme for the use of clean fuel in public transport vehicles. - The National III emission standard has been implemented in advance of schedule for newly purchased public transport vehicles as well as replacements. In 2006, the number of replacements amounted to 3 223, making a total of 6 924 public transport vehicles complying with the National III emission standard in the city. <u>Guangzhou</u> - LPG public transport vehicles are being actively promoted. There are over 6 400 LPG-driven public buses in Guangzhou, accounting for 80% of all public buses in the city (as at August 2007). The 16 000 taxis in the city have largely completed the LPG modification work. - At present, there are 27 LPG refilling stations. <u>Huizhou</u> - From 1 August 2007, all newly added public transport vehicles are required to comply with National III emission standard.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To require all new motor vehicles to fully meet emission standards. To step up annual inspection and on-road spot checks of in-use vehicles. To strengthen the control of in-use vehicles to ensure that over 90% of motor vehicles in the cities within the region will meet tailpipe emission standard by 2005.	The National II emission standard has been adopted since 1 July 2005. A recommended catalogue of motor vehicles complying with the National III emission standard has been introduced on 1 July 2006 to encourage and support the sale, import, purchase and use of motor vehicles on the catalogue. An application has been submitted to the State Council to advance the implementation of the National III emission standard in the PRD cities. <u>Guangzhou</u> - The requirement for all newly registered vehicles to comply with the National III emission standard has been advanced to 1 September 2006. - In 2006, spot checks were conducted on a total of 41 470 motor vehicles. 9 719 motor vehicles were required to carry out maintenance repairs within the specified period. - The "blacklist" of smoky vehicles with excessive emissions was first published on the Guangzhou Environmental Protection website in August 2007. <u>Shenzhen</u> - A catalogue of motor vehicles complying with the National III emission standard has been implemented since 1 July 2007. - A reporting and joint investigation system for smoky vehicles has been established. - In 2006, roadside inspections and random checks were conducted ona total of 41 300 motor vehicles, with prosecutions initiated on 6 230 motor vehicles with excessive emissions.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To study the feasibility of advancing the implementation of National IV emission standard for light-duty vehicles by 2010. To study the feasibility of advancing the implementation of National V emission standard for heavy-duty vehicles by 2010.	Preparatory work is being conducted.
	To strengthen management on regular inspections of in-use motor vehicles to make sure that the required environmental performance is met.	The in-use motor vehicles inspection / maintenance system is progressively implemented and improved. Non-compliance motor vehicles are prohibited from using the roads. <u>Shenzhen</u> The pollutant emissions inspection and mandatory maintenance system for motor vehicles is implemented since 1 December 2007.
	To experiment a labelling system on the environmental categorization of in-use vehicles in key cities, and to regulate and restrict vehicles of certain categories using the road according to the ambient air quality.	<u>Shenzhen</u> An environmental labelling system for the categorization of motor vehicles has been introduced. <u>Guangzhou</u> Starting from 1 January 2007, motor vehicles complying with the National III emission standard will be granted an environmental label.

Measures	Implementation Programme	Progress (Up to 30.11.2007)
	To vigorously promote the sale of motor vehicle fuel complying with National III standard in the province.	Guangdong Province has already announced the local National III standard for motor fuel in August 2006. The extension and reconstruction project of Sinopec's Guangzhou subsidiary was commissioned on 9 September 2006. The company is now capable of producing motor fuel complying with National III standard. <u>Guangzhou</u> Motor fuel complying with the National III standard is supplied in 41 petrol filling stations within the city since end 2006. <u>Shenzhen</u> Starting from 16 April 2007, motor fuel complying with the National III standard is supplied at all petrol filling stations across the city.
	To study ways to control the growth of motorcycles in key cities.	Motorcycles have been banned from travelling in the urban areas in Guangzhou and Dongguan since 1 January 2007 and 1 September 2007 respectively.

Additional Control Measures Recommended for the PRD Economic Zone

Based on the findings of the Mid term Review, the following additional control measures are recommended for adoption in the PRD Economic Zone:

- to require all new coal-fired power plants to install denitrification (de-NOx) systems;

- to introduce more stringent local emission standards for industrial and commercial boilers on or before 2010;

- to promote cleaner production in the printing industry in the PRD Economic Zone, to encourage the use of printing inks that complied with the environmental standards for the industry, and to promote the wider use of product certification system across the industry;

- to tighten emissions control on local vessels, including the implementation of relevant emission standards for local vessels on or before 2010;

- to promote cleaner production in the manufacturing of paint products, to introduce a combined mandatory audit and voluntary declaration system for the paint products, and to strengthen efforts on promoting cleaner production in the paint industry;

- to implement in phases a labelling scheme for VOC-containing products in the PRD Economic Zone;

- to require manufacturers of VOC-containing domestic consumer products, such as aerosol insecticide, detergent and adhesives sold in the PRD Economic Zone, to meet cleaner production requirements so that their products would meet environmental certification standards; and

- a public awareness programme should be established to promote use of products with low VOC contents.