For discussion On 21 January 2005

# Legislative Council Panel on Environmental Affairs

# 2005 Policy Agenda Policy Initiatives of the Environment, Transport and Works Bureau

#### **Introduction**

1. The 2005 Policy Agenda just issued lists the Government's new and on-going initiatives. This note elaborates on the initiatives affecting the environment portfolio of the Environment, Transport and Works Bureau in the 2005 Policy Agenda. The paper also gives an account of the position reached on the initiatives in the 2004 Policy Agenda.

#### **2005 Policy Agenda**

Environmentally Responsible Development

#### **New Initiative**

#### 2.1 Initiative

Develop a programme for implementing Harbour Area Treatment Scheme (HATS) Stage 2 in the light of the outcome of the public consultation exercise on the way forward.

#### A descriptive account of the initiative

Since the full implementation of HATS Stage 1 in late 2001, the water quality of the harbour has improved significantly. The Stonecutters Island Sewage Treatment Works now provides chemical treatment for 1.4 million cubic meters of sewage a day (or approximately 75% of the sewage generated in the harbour area) and prevents some 600 tonnes of sludge from entering our harbour waters. To deal with the remaining 25% of the sewage currently being discharged into the harbour virtually untreated and to meet the long term development needs of the harbour areas, a five-month public consultation exercise on the way forward for HATS Stage 2 was conducted in 2004. In light of the support gained during the public consultation, we will develop a programme in 2005 for implementing HATS Stage 2 in phases with a view to providing sufficient

capacity to treat 2.8 million tones of sewage from both sides of Victoria Harbour in 2013 as stated in the Policy Address. In this regard, we will, as the first priority of our implementation programme, press ahead with the provision of the advanced disinfection system to improve the water quality of the Tsuen Wan beaches and the construction of the deep tunnels which will take the longest time to complete. The Government will also work out a more concrete timetable for HATS Stage 2B to show our clear commitment to it. The implementation of HATS Stage 2, however, will have significant recurrent consequences. Therefore, we will also review the existing sewage charging scheme as stated in the new initiative 2.4 below according to the "polluter-pays" principle. This will help minimize the level of Government subsidy required to operate sewerage infrastructure such as HATS Stage 2, as otherwise the subsidy will have to be borne by taxpayers ultimately.

#### 2.2 Initiative

Draw up an action timetable for implementing the requirements of the Stockholm Convention concerning regulation of persistent organic pollutants (POPs).

#### A descriptive account of the initiative

The Stockholm Convention on Persistent Organic Pollutants has been applicable to Hong Kong with effect from 11 November 2004. The Convention seeks to prohibit and eliminate the production and usage of certain hazardous chemicals to protect human health and the environment. The immediate action required of the HKSAR is to develop an Implementation Plan which will form part of the National Implementation Plan of the People's Republic of China to be submitted to the secretariat of the Convention before November 2006. The Implementation Plan should include –

- (a) an assessment of the current and projected release of POPs in the form of an inventory;
- (b) an evaluation of the efficacy of laws and policies, and
- (c) a strategy and an implementation schedule to manage POPs as required by the Convention.

#### 2.3 Initiative

Consult the public and the trades on a mandatory energy efficiency labelling scheme to facilitate consumers to choose energy efficient equipment.

# A descriptive account of the initiative

The Electrical and Mechanical Services Department (EMSD) has been

expanding its voluntary Energy Efficiency Labelling Scheme to cover increasingly more types of household appliances and office equipment over the years. The Scheme aims to save energy by informing potential customers of the energy consumption and efficiency rating of different types of products, so that they can take such factors into consideration before making their purchase The Scheme now covers sixteen types of household appliances and decisions. office equipment including refrigerators, room coolers, washing machines, electric clothes dryers, compact fluorescent lamps, electric storage water heaters, electric rice-cookers, dehumidifiers, television sets, electronic ballasts, photocopiers, multifunction devices, laser printers, LCD monitors, computers and domestic gas instantaneous water heaters. For those types of appliances or equipment whose label penetration rates are very high such as refrigerators and room coolers, it is an opportune time to consider taking a further step to make the acquisition and display of energy efficiency labels a mandatory requirement, thereby allowing consumers to have complete access to the energy efficiency performance of all brands supplying the types of appliances or equipment in This will in turn help boost the label penetration rates for those types of appliances and equipment which have recently been covered by the Scheme such as computers and electronic ballasts. The Government will prepare a consultation document on the proposed plan to turn the Scheme from voluntary to mandatory and consult the public and the traders around mid 2005.

#### 2.4 Initiative

Review the existing sewage services charging scheme according to the "polluter-pays" principle with a view to achieving an equitable sharing of the funding responsibility in respect of the provision of sewage services.

# A descriptive account of the initiative

The present sewage services charging scheme was introduced in 1995. Over the years, the Government has only been recovering roughly 50% of the recurrent cost of providing sewage services to ordinary households and businesses. In recent years, the Government has also failed to achieve its target of recovering the full recurrent cost of providing sewage services to the 30 trades subject to the Trade Effluent Surcharges (TES). On the other hand, the TES trades, in particular the catering sector, have complained about the basis of determining the TES and the appeal mechanism. In order to uphold the "polluter-pays" principle and to reduce the increasing subsidy to be borne by taxpayers for sewage services due to the commissioning of new sewerage facilities, we plan to review the charging scheme this year with a view to achieving an equitable sharing of the funding responsibility.

#### 2.5 Initiative

Draw up measures to promote and facilitate the development of the recycling

industry under the environmental industry policy.

#### A descriptive account of the initiative

Land is crucial for the successful development of the recycling industry. We will identify more land for exclusive bidding by recyclers. In addition, a site of 20 hectares in Tuen Mun Area 38 has been earmarked for development as a Recovery Park. It is estimated that Phase I of the Park will be commissioned in late 2006. Government departments will adopt a green procurement policy to help create a market for environmentally friendly products. We will also make a policy to implement mandatory product responsibility schemes to ensure the recovery and recycling of the products concerned such as waste tyres. In the long run, we need to consider the enactment of legislation on recycling to build a circular economy.

#### 2.6 Initiative

Roll-out a territory-wide source separation campaign (based on the results of pilot schemes on separation of domestic waste) to encourage households to separate waste at source thereby improving recovery and reducing waste.

#### A descriptive account of the initiative

The programme aims to encourage households to separate waste at home and to make it more convenient for residents to separate waste by providing waste separation facilities on each floor of the buildings. Recyclables are collected within each estate and sold to recyclers direct. This would make the recycling process more sustainable through a broader collection network, lower costs and a higher return for both the residents and the recyclers. Society as a whole would benefit as more waste are collected for recycling and diverted away from landfills.

#### 2.7 Initiative

Strengthen cooperation with Guangdong to improve the air quality of the Pearl River Delta (PRD) region. In 2005, we will start monitoring jointly the air quality of the region and discuss the introduction of further enhanced emission control measures.

## A descriptive account of the initiative

To improve the air quality of the whole PRD region, the Environmental Protection Department (EPD) of Hong Kong and the Environmental Protection Bureau of Guangdong Province conducted a joint study on regional air quality during 1999-2002 to analyse 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 control measures can be prioritised accordingly.

After the study was completed, the HKSARG and the Guangdong Provincial Government reached a consensus in April 2002 to reduce by 2010, on a best endeavour basis, the regional emissions of sulphur dioxide, nitrogen oxides, respirable suspended particulates and volatile organic compounds by 40%, 20%, 55% and 55% respectively, using 1997 as the base year. Achieving these targets will not only enable Hong Kong to meet its current Air Quality Objectives, but also significantly improve the air quality of the PRD region and relieve the regional smog problem.

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 above emission reduction targets. The Pearl River Delta Air Quality Management and Monitoring Special Panel was also set up under the Hong Kong-Guangdong Joint Working Group (JWG) on Sustainable Development and Environmental Protection to follow up on the tasks under the Management Plan.

The JWG held its fifth meeting on 22 December 2004 in Hong Kong to discuss the implementation progress of the Management Plan in 2004 and a detailed action plan for 2005.

The meeting agreed that the environmental protection departments of the two governments would start operating a regional monitoring network covering the entire PRD region with 16 monitoring stations in the first quarter of 2005. Subject to the operational situation of the monitoring network, a joint data centre would publish the monitoring results as soon as possible.

A new Special Panel, comprising members of the Economic and Trade Commission of the Guangdong Province; the Environment, Transport and Works Bureau of the HKSARG and relevant departments of the two governments, will be set up under the JWG. The new panel will be responsible for promoting public education and technology of the energy saving measures and clean production amongst the commercial and industrial sectors in the PRD region. The detailed work plan for 2005 agreed by at the JWG meeting is at **Annex A**.

We will impose ceilings on the total emissions of the local power companies. We will also make it a policy to require them to maximize the use of natural gas in power generation and develop renewable energy.

#### 2.8 Initiative

Introduce a Product Responsibility Scheme (PRS) for waste tyres to provide an

incentive for stakeholders to reuse or recycle waste tyres, thereby reducing the volume of tyres to be disposed of in landfills.

# A descriptive account of the initiative

As waste tyres are difficult or uneconomical to recycle, there is little recycling of tyres in HK at present and a large volume of the waste tyres is disposed of in landfills. We therefore intend to introduce a PRS to collect fees for managing and providing financial assistance to the waste tyre reuse/recycling industry. A Regulatory Impact Assessment study to identify possible options and their impact on the trade and stakeholders is near completion and we are considering the findings. We aim to commence public consultation in the second quarter of 2005 and to implement the PRS on waste tyres by late 2006.

# **On-going Initiatives**

#### 2.9 Initiative

Encouraging the power companies to undertake pilot production-scale wind energy projects for public demonstration and evaluation purposes and continue to promote the wider application of renewable energy (RE).

#### A descriptive account of the initiative

The power companies have made progress in setting up the pilot production-scale wind turbine for public demonstration and evaluation purposes.

After making reference to the wind data collected in the past, the Hong Kong Electric (HKE) proposed to build a production-scale wind turbine on Lamma Island. The Environmental Impact Assessment of the project has been completed and approved by the authority. The Company is now pressing ahead with the implementation. It is expected that HKE's wind turbine will be in operation in early 2006. The CLP Power is now evaluating the feasibility of a pool of sites and will monitor the wind data at the shortlisted sites. It is expected that CLP Power's project will be completed around 2007-08.

#### 2.10 Initiative

Identifying the viable technologies to be adopted with a view to developing state-of-the-art, cost-effective and environmentally friendly large-scale waste treatment facilities in Hong Kong. We will consult the public on the options to be adopted.

### A descriptive account of the initiative

In response to our request, local and international waste management industries

have submitted proposals on developing large-scale waste treatment facilities in Hong Kong. An advisory group comprising mainly non-officials is evaluating the different technology options received. We will consult the public in the second quarter of 2005 on the technology options to be adopted in Hong Kong.

#### 2.11 <u>Initiative</u>

Continuing to implement the "polluter-pays" principle. We will introduce a disposal charging scheme for construction and demolition waste. This will provide economic incentives to reduce such waste and carry out sorting to facilitate reuse or recycling.

# A descriptive account of the initiative

The Waste Disposal (Amendment) Ordinance 2004 which enables the implementation of construction waste disposal charges was passed by the Legislative Council (LegCo) in July 2004. Two sets of subsidiary legislation setting out the implementation details of the construction waste disposal charging scheme were passed by LegCo in early January 2005. We are now actively undertaking necessary preparatory work for implementing the scheme, including upgrading existing waste disposal facilities, providing sorting facilities, dry-runs, and education and publicity programmes. We aim to implement the charging scheme in summer 2005.

#### 2.12 Initiative

Continuing to explore opportunities to reuse inert construction and demolition (C&D) materials outside Hong Kong. We signed a Cooperation Agreement on Cross-boundary Marine Dumping with the State Oceanic Administration on 31 March 2004 to provide a foundation for the accommodation of inert construction and demolition materials in Mainland waters. We will continue our collaboration with the construction industry and relevant authorities on the identification of land formation projects in the Mainland to reuse our inert materials.

#### A descriptive account of the initiative

We have been actively discussing with the Mainland authorities the implementation details for beneficial reuse of inert C&D materials in land formation projects in the Mainland with a view to starting the scheme in 2005. We will continue our collaboration with the relevant authorities and the construction industry in this regard.

#### 2.13 Initiative

Working towards the implementation of the Regional Air Quality Management Plan with the Guangdong Provincial Government including studying the introduction of a pilot emissions trading scheme among power plants in Hong Kong and Guangdong to optimise the use of resources in the reduction of emissions in the same air shed to improve air quality in the PRD region.

Striving to reduce by 2010 the emission of four major air pollutants in the region by such levels as will enable Hong Kong to achieve the current Air Quality Objectives.

## A descriptive account of the initiative

The JWG meeting held on 22 December 2004 in Hong Kong discussed the implementation of the Management Plan in 2004. The emission control measures of both places and the progress are summarised in **Annexes B and C**.

The JWG has also laid down a schedule for developing the Emissions Trading Pilot Scheme for Thermo Electrical Power Plants (the Pilot Scheme) in the PRD region. The JWG aims to report to the two governments by mid-2006 and present in the third quarter of 2006 the details of the Pilot Scheme to the power plants in Hong Kong and Guangdong so that the prospective participants can identify their trading partners and draw up the emissions trading agreements.

#### 2.14 Initiative

Implementing an incentive scheme to encourage replacement of diesel light buses with LPG or electric light buses.

# A descriptive account of the initiative

Since August 2002, we have been implementing an incentive scheme to encourage the early replacement of diesel light buses with LPG or electric ones. Under the scheme, a diesel public light bus (PLB) owner is entitled to a one-off grant of \$60,000 or \$80,000 for replacing his light bus with an LPG or an electric one. A diesel private light bus owner is entitled to exemption from first registration tax if he replaces his light bus with an LPG or electric one. Up to now, nearly 80% of newly registered PLBs are LPG ones. About 30% (about 1300 numbers) of Hong Kong's PLB fleet are LPG models.

#### 2.15 Initiative

Implementing the programme to retrofit pre-Euro heavy diesel vehicles with catalysts through provision of financial assistance and introducing legislation to make the installation mandatory upon completion of the retrofit programme.

# A descriptive account of the initiative

Diesel vehicles are the dominant source of street-level air pollution in Hong Kong. In particular, pre-Euro diesel vehicles, which were first registered before April 1995, are more polluting than newer diesel vehicles that meet more

stringent emission standards. To improve air quality at the street level, we have to take measures to reduce the emissions from pre-Euro diesel vehicles. We completed an incentive programme to install particulate reduction devices on pre-Euro light diesel vehicles in 2001 and made the installation mandatory in December 2003.

We also commenced in end-2002 and completed in end-2004 a similar installation programme for pre-Euro heavy diesel vehicles. About 90% (32,000) of the vehicles entitled to participate in the programme have been installed with particulate reduction devices. There are about 3,300 pre-Euro diesel heavy vehicles which, for operational reasons, need to keep their engines running while stationary (such as concrete mixer vehicles). The retrofit work for these vehicles will commence in mid-2005 and be completed by end-2005. We will make the devices mandatory for these vehicles after the completion of the installation programme.

#### 2.16 Initiative

Overseeing the implementation of the new nature conservation policy including a pilot scheme on the improvement proposals of management agreement and public-private partnership, with the objective of better achieving the nature conservation objective, in particular enhancing conservation of ecologically important habitats on private land.

#### A descriptive account of the initiative

Taking account of the comments received during the three-month public consultation held in 2003, we have drawn up a more comprehensive nature conservation policy with the objective of better achieving the nature conservation objectives, in particular enhancing conservation of ecologically important sites which are in private ownership. We announced the new policy together with an implementation programme on 11 November 2004. Under the new policy –

- (a) there is a new policy statement with clearer vision and policy objectives;
- (b) a scoring system has been adopted for assessing the relative ecological importance of sites with the objective of identifying a list of priority sites for enhanced conservation;
- (c) pilot schemes will be implemented for the two new conservation measures to be implemented for the 12 priority sites identified, viz. management agreements with landowners and public-private partnership (PPP). In this regard, the Environment and Conservation

Fund (ECF) Committee has agreed to allocate \$5 million from ECF for implementing pilot management agreement projects. Funding applications and pilot PPP proposals are now being invited;

- (d) existing nature conservation measures will continue and be enhanced;
- (e) the Wetland Advisory Committee will be converted into a Nature Conservation Sub-committee of the Advisory Council on the Environment;
- (f) conservation education and publicity will be enhanced; and
- (g) establishment of a nature conservation trust will be further explored.

We will oversee the implementation of the new policy and review the implementation of the two new measures, viz. management agreements and PPP, in two to three years' time.

#### **2004 Policy Agenda**

#### Environmentally Responsible Development

#### **New Initiatives**

#### 3.1 Initiative

Encourage the power companies to undertake pilot production-scale wind energy projects for public demonstration and evaluation purposes and continue to promote the wider application of renewable energy (RE).

#### Progress Made/Present Position

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.9 above.

#### 3.2 Initiative

Consult the public on the viable technology(ies) to be adopted with a view to developing state-of-the-art, cost-effective and environmentally friendly large-scale waste treatment facility(ies) in Hong Kong.

#### Progress Made/Present Position

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.10 above.

#### **On-going Initiatives**

#### 3.3 Initiative

Working towards the implementation of the Regional Air Quality Management Plan with the Guangdong Provincial Government including studying the introduction of a pilot emissions trading scheme among power plants in Hong Kong and Guangdong to optimise the use of resources in the reduction of emissions in the same air shed to improve air quality in the Pearl River Delta region.

Striving to reduce by 2010 the emissions of four major air pollutants in the region by such levels as will enable Hong Kong to achieve the current Air Quality Objectives.

#### **Progress Made/Present Position**

They are on-going initiatives in the 2005 Policy Agenda. Please refer to paragraph 2.13 above.

#### 3.4 Initiative

Continuing to implement the "polluter-pays" principle and plan for the introduction of a disposal charging scheme for construction and demolition waste in 2004. This is expected to provide economic incentives for waste producers to reduce such waste and carry out sorting to facilitate reuse/recycling.

## **Progress Made/Present Position**

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.11 above.

#### 3.5 Initiative

Implementing the pilot scheme to test out the economics and logistics of wet-and-dry garbage sorting. Upon the completion of the pilot scheme in the first quarter of 2004, we will review the viability and cost-effectiveness of this form of waste recovery, and will decide on the way forward.

#### **Progress Made/Present Position**

The Wet/dry Waste Separation Pilot Programme was carried out in four housing estates from April 2003 to July 2004. Participating households separated wastes into wet and dry wastes which were then gathered at Refuse Collection Points of the estates by cleansing workers. Contractors of the Food and Environmental Hygiene Department then delivered the dry wastes to Island East Refuse Transfer Station for sorting. The sorted dry wastes were sold to

recyclers. Revenue generated was used to offset the sorting cost. Although the scheme was effective in improving domestic waste recovery rate, the cost of this recovery method was too high.

With the experience gained in the Wet/dry Waste Separation Pilot Programme, a 12-month pilot programme on Source Separation of Waste was launched in August 2004 in 13 housing estates in the Eastern District covering about 37,000 households and a population of about 120,000. The response so far has been encouraging.

#### 3.6 Initiative

Drawing up a more comprehensive nature conservation policy and a proposed implementation programme by taking into account the comments received during the three-month public consultation exercise which ended in mid-October 2003 with the goal of better achieving the nature conservation objective, in particular enhancing conservation of ecologically important habitats on private land.

#### **Progress Made/Present Position**

We announced on 11 November 2004 a new nature conservation policy together with an implementation programme. The new policy aims to better achieve the nature conservation objectives, in particular to enhance conservation of ecologically important sites which are in private ownership. In drawing up the new nature conservation policy, we have taken into account the views received during the public consultation (see paragraph 2.16 for more details on the new nature conservation policy).

#### 3.7 Initiative

Implementing an incentive scheme to encourage replacement of diesel light buses with LPG or electric light buses.

#### Progress Made/Present Position

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.14 above.

#### 3.8 Initiative

Implementing the programme to retrofit pre-Euro heavy diesel vehicles with catalysts through provision of financial assistance and introducing legislation to make the installation mandatory upon completion of the retrofit programme.

#### **Progress Made/Present Position**

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.15 above.

#### 3.9 Initiative

Exploring opportunities to reuse inert construction and demolition (C&D) materials outside Hong Kong. We will continue our collaboration with the construction industry and relevant authorities on the identification of land formation projects in the Mainland to reuse our inert materials.

## **Progress Made/Present Position**

It is an on-going initiative in the 2005 Policy Agenda. Please refer to paragraph 2.12 above.

### 3.10 Initiative

Consulting the public on the way forward for the remaining stages of the Harbour Area Treatment Scheme in the light of the findings of the trial and studies on the options recommended by the International Review Panel.

### **Progress Made/Present Position**

The implementation of the remaining stages of HATS is a new initiative in the 2005 Policy Agenda. Please refer to paragraph 2.1 above.

**Environment, Transport and Works Bureau January 2005** 

# Annex A

# Pearl River Delta Air Quality Management and Monitoring 2005 Action Plan

Time	Work Items	
First Quarter 2005	• Conduct technical exchange to prepare for the adoption of vehicle emission standard equivalent to Euro III Standard in Pearl River Delta Economic Zone (PRDEZ) in 2006.	
	• Collect information about the specific arrangements and implementation schedules of various cities in the region for the adoption of vehicle emission standard equivalent to Euro III Standard in 2006.	
	• Commission the regional air quality monitoring network based on the requirements in operation, quality control/assurance, data administration and application in the "Handbook on Quality Control/Quality Assurance of the Regional Monitoring Network" and "Guidance Notes on the Application and Administration of Data from the Regional Air Quality Monitoring Network".	
	• Commence operation of the joint data centre in the Guangdong Province Environmental Protection Monitoring Centre and quality assurance centre in the Environmental Protection Department of Hong Kong together with the commission of the regional monitoring network.	
	• Conduct technical exchange for the preparation, implementation and quality assurance of on-line monitoring of major pollution sources in PRDEZ.	
Second Quarter 2005	• Conduct the first site inspection to evaluate the progress of the implementation of air pollution control measures of both sides.	
	Complete the formulation of technical	

	requirements for on-line continuous monitoring
	of coal-fired and oil-fired generating units in the region.
	• Develop regional coordination arrangements and implementation schedules for the adoption of vehicle emission standard equivalent to Euro III Standard in PRDEZ in 2006 for the approval of the relevant authorities.
	• Submit proposals to the two governments regarding the pollution control measures of major pollution sources for nitrogen oxides (NOx).
Third Quarter 2005	• Conduct the second site inspection to evaluate the progress of the implementation of air pollution control measures of both sides.
	• The environmental monitoring departments of both sides will submit the "Joint Pearl River Delta Regional Air Quality Report" (January to June 2005) and the "Operational Report of the Regional Monitoring Network" in October 2005 for the consideration of the Special Panel.
Fourth Quarter of 2005	• Complete the "2003 PRD Regional Emissions Inventory ".
	• With reference to the method of the "Preparation Handbook" review and amend the Regional Emissions Inventory for years 1997 and 2001.
	• Draw up the action plan for the preparation of the 2004 Regional Emissions Inventory.
	• Complete the "2005 Annual Report on PRD Regional Air Quality Management Plan".
Others	• Discuss and propose thematic analytical studies to make full use of the data gathered by the regional monitoring network and of the monitoring stations as monitoring platforms with reference to practical needs.

- Arrange for technical exchanges and training of the personnel concerned for carrying out the quality control/quality assurance work of the regional monitoring network.
- Arrange for technical exchanges and training of the personnel concerned for carrying out the work detailed in the "Preparation Handbook".

Annex B

# Pearl River Delta Regional Air Quality Management Plan Enhanced Control Measures of the Hong Kong SAR

Measure	Implementation Programme	Progress (Up to End 2004)
Encourage the replacement of diesel light buses with light buses using cleaner fuels (started)	Incentives have been provided since 2002 to encourage early replacement of diesel light buses with ones that run on liquefied petroleum gas (LPG) or electricity.	An incentive scheme has been introduced since August 2002. At present, there are 1 412 LPG light buses and 1 electric light bus. About 80% of the newly registered public light buses are LPG ones. The incentive scheme will end by end-2005.

Require the retrofitting of particulate reduction devices on pre-Euro diesel vehicles	Financial assistance has been provided since 2002 to retrofit pre-Euro heavy diesel vehicles with particulate reduction devices.	A scheme to assist the owners of pre-Euro heavy diesel vehicles in the territory to retrofit, on a voluntary basis, their vehicles with catalytic converters by phases was commenced in December 2002 and was completed in end-2004. There are currently more than 32 000 vehicles that are retrofitted with such converters.  Besides, all pre-Euro franchised buses have been installed with catalytic converters to reduce the emission of particulates.
Tighten the motor fuel standards	Petrol standards will be tightened to Euro IV in early 2005 (the motor diesel standard has already been tightened to Euro IV since April 2002).	The relevant legislative amendments has come into effect on 1 January 2005.
Enhance the vapour recovery systems at petrol filling stations	Legislation requiring the recovery of petrol vapour emitted during vehicle refuelling at petrol filling stations was introduced in 2004.	The regulation has been introduced into the Legislative Council and is expected to be implemented in the first quarter of 2005.

Tighten vehicle emission standards	Motor vehicle emission standards will be tightened to Euro IV by 2006.	Preparatory work for legislative amendments is underway.
Reduce the emission of VOC from printing operations, paints and consumer products	Legislation requiring the control of products with VOC contents.	A public consultation lasting for 2 months on introducing legislation for registration and labelling of products containing VOC has been completed. We are studying the views collected from the public and the relevant industries and will start drafting of the ordinance within 2005.
	Legislation to reduce the use of products with a high VOC content and to develop VOC emission standards for printing operations will be introduced gradually.	Review will be conducted after the legislation on VOC registration and labelling has come into force.
Reduce emissions from power stations	Effective and flexible mechanisms (which may include emissions trading) will be set up to control the total emissions of SO <sub>2</sub> , NOx and RSP from power stations to achieve their respective reduction targets by 2010.	We are discussing the way forward with the two power companies.

# Annex C

# Pearl River Delta Regional Air Quality Management Plan Enhanced Control Measures of Guangdong Province

Measures	Implementation Programme	Progress (Up to End 2004)
Use cleaner energy	To greatly reduce the energy consumption per GDP. To construct by 2010 an energy production and supply system that is safe, stable, economical, efficient and clean.	In progress.
	To construct an LNG trunk pipeline and carry out the associated works. To complete in 2005 Phase I that will have a capacity of 3 million tonnes/year. To complete Phase II in 2009 that has a capacity of 6 million tonnes/year and to finish construction of a number of LNG power plants.	It is expected that Phase I of the work will be completed in 2006 and the four LNG power plants at Daya Bay in Huizhou, Shenzhen East, Qianwan in Shenzhen and Zhujiang in Guangzhou will be commissioned at the same time.
	To upgrade by 2005 the 500kV dual circuit annular core transmission grid to cater for the transmission of electricity from western provinces.	The "5AC 3 DC" main transmission channels from western provinces will be completed ahead of schedule this year.

Control the sulphur contents of fuels	To restrict the use of high sulphur fuels. To limit the sulphur content of the fuel oil and coal used in the acid rain control zone to below 0.8% by 2005.	In progress.
Reduce emissions from coal-fired and oil-fired power stations	To finalise by 2005 plans for installing flue gas desulphurisation systems at power plants in Shajiao, Huangpu, Taishan and Zhuhai.	Power plants installed with flue gas desulphurisation systems include Shajiao Power Plant A (Unit 5), Shennzhen Xibu Power
	To require all oil-fired and coal-fired power generation units of capacity above 125MW to be equipped with flue-gas desulphurisation systems by 2007.	Plant (Units 4, 5 and 6), Guangzhou Hangyun Power Plant and Guangzhou Ruiming Power Plant. Installations at other power plants are in progress.
Control emissions from industrial boilers and industrial processes	To phase out coal-fired boilers with capacity less than 2 tonnes/hour in the urban areas of cities. To require all large and medium-size industrial boilers to install desulphurisation systems or adopt clean combustion technologies to reduce emissions.	In progress.
	To continue to phase out various production technologies or installations that cause serious pollution by emitting sulphur dioxide, smoke and particulates.	In progress.

Reduce the emission of VOC from paints	To replace by 2003 paints using VOCs like Xylene as solvents.	Completed.
Reduce exhaust 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.	The "Planning of the Transport Routes for Inter-City High Speed Railway Network in the PRD Region "has been submitted to the State Council for approval in August 2003.
	To develop green transport by implementing clean vehicle action programme in major cities within the region. To encourage the use of clean fuels, develop electric vehicles and actively promote the use of advanced clean fuel motor vehicles.	Shenzhen - All public vehicles must use motor diesel with sulphur content of less than 500 ppm; introduction of motor diesel with sulphur content of less than 500 ppm; implementation of environmental-friendly classification management scheme for motor vehicles.  Guangzhou - Motorcycles are prohibited from using certain road sections in the urban areas; introduction of motor diesel with sulphur content of less than 500 ppm.

To require all new motor vehicles to 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 with the objective of ensuring that over 90% of motor vehicles in the cities within the region will meet emission standards by 2005.

Shenzhen -Newly registered vehicles are required to comply with the National II emission standard; all newly registered public vehicles are required to comply with the National III emission standard.