

For discussion  
On 14 January 2004

**Legislative Council  
Panel on Environmental Affairs**

**2004 Policy Agenda  
Policy Initiatives of the Environment, Transport and Works Bureau**

**INTRODUCTION**

1. The 2004 Policy Agenda just issued lists the Government's new and on-going initiatives over the next three and a half years. This note elaborates, where applicable, on the initiatives affecting the environmental portfolio of the Environment, Transport and Works Bureau in the 2004 Policy Agenda. Where necessary, it also gives an account of the position reached on initiatives in the 2003 Policy Agenda.

**2004 Policy Agenda**

***Environmentally Responsible Development***

**New Initiatives**

**2.1 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).

**A descriptive account of the initiative**

As part of the outcome of the interim review of the Scheme of Control Agreements for the two power companies, we have secured their undertakings to each plan and set up a pilot production-scale wind turbine for public demonstration and evaluation purposes, subject to detailed feasibility studies. We will work out the implementation details with the two power companies. We will also work closely with the Economic Development and Labour Bureau to formulate the role of RE in the electricity market after 2008 when the existing Scheme of Control Agreements for the two power companies expire.

## 2.2 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.

### A descriptive account of the initiative

We cannot rely on waste reduction and recycling alone in dealing with our waste problem since not all waste can be recycled. In the long run, large-scale waste treatment facility(ies) will be required to reduce the volume of unrecyclable waste that has to be disposed of. In order to identify the technology(ies) that can meet the highest international environmental standards and that is(are) at the same time cost-effective, we invited the local and international waste management industry in 2002 to submit expressions of interest on the development of large-scale waste treatment facility(ies) in Hong Kong. An advisory group, comprising mainly non-officials, is now evaluating the proposals received. We aim to consult the public in 2004 on the viable technology(ies) which can be adopted in Hong Kong before making a decision.

## **On-going Initiatives**

## 2.3 Initiatives

Working towards the implementation of the Regional Air Quality Management Plan with the Guangdong Provincial Government including 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 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 initiatives

In the 1999 Policy Address, we announced a comprehensive programme to reduce emissions from motor vehicles in Hong Kong. The programme includes replacing diesel taxis with ones that are run on liquefied petroleum gas (LPG), replacing light buses with ones that are run on alternative fuels,

retrofitting pre-Euro diesel vehicles with emission reduction devices, adoption of Euro III emission standard for newly registered vehicles and raising the fixed penalty on smoky vehicles. We anticipated that the programme would reduce the particulate and nitrogen oxide emissions from motor vehicles by 80% and 30% respectively by end-2005. The measures that we have implemented thus far have already reduced the particulate and nitrogen oxide emissions from motor vehicles by 63% and 28% respectively. We are confident that we will be able to achieve the anticipated results by the end of 2005.

The measures that we have implemented are bearing fruits. Compared with 1999, the time air quality recorded at the roadside air quality monitoring stations exceeded Air Pollution Index 100 in 2003 had dropped by 35%. The average particulate and nitrogen oxide concentrations at the roadside had also dropped by 13% and 23% respectively.

However, while air quality at the street level has been improving, the ambient air quality, which is affected by air quality in the Pearl River Delta Region, has been deteriorating. Compared with 1999, the time air quality recorded at the general air quality monitoring stations exceeded Air Pollution Index 100 in 2003 had increased by 8%. Arresting the deterioration of regional air quality requires the joint effort of both Hong Kong and Guangdong.

On this front, the Hong Kong Special Administrative Region Government and the Guangdong Provincial Government reached a consensus in April 2002 to reduce, on a best endeavour basis, by 2010 the regional emissions of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), respirable suspended particulates (RSP) and volatile organic compounds (VOC) by 40%, 20%, 55% and 55% respectively, using 1997 as the base year. Achieving the targets will enable Hong Kong to meet its current air quality objectives. The problem of smog will also be significantly reduced.

The two Governments have set up the "Pearl River Delta Air Quality Management and Monitoring Special Panel" under the Hong Kong/Guangdong Joint Working Group on Sustainable Development and Environmental Protection to work out a regional air quality management plan for achieving the emission reduction targets. The Special Panel will also monitor the regional air quality and analyse the effectiveness of the improvement measures to be implemented.

The regional air quality management plan has now been drawn up. It includes the introduction of enhanced air pollution control measures, the compilation of an inventory of the air pollution emissions in the Pearl River Delta (PRD) Region and the setting up of a regional air quality monitoring network. Details of the enhanced pollution control measures to be implemented in Hong Kong and Guangdong are set out at the Annex.

Emissions trading is one of the possible tools for local power stations to meet the reduction targets of the three relevant pollutants (i.e. SO<sub>2</sub>, NO<sub>x</sub> and RSP) in a more cost effective manner and thus with a smaller implication for electricity tariffs. We have already obtained the support of the State Environmental Protection Administration for introducing an emissions trading pilot scheme among the power stations in Hong Kong and the rest of the PRD Region. As we have informed Members earlier, we are now working with our Guangdong counterparts on the relevant issues relating to the pilot scheme. Our target is to have it set up within three years.

#### 2.4 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.

##### A descriptive account of the initiative

We have conducted many rounds of consultation with the relevant trades and advisory committees on the revised disposal charging scheme for construction and demolition (C&D) waste incorporating various features to address the trades' concerns as far as practicable. We are continuing discussion with the trades on the detailed arrangements. In December 2003, we introduced into the Legislative Council the Waste Disposal (Amendment) (No.2) Bill 2003, which aims to introduce charging for the disposal of C&D waste at landfills, sorting facilities and public fill reception facilities. Subject to passage of the Bill through the Legislative Council, we aim to implement the charging scheme in late 2004.

#### 2.5 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.

#### A descriptive account of the initiative

The wet-and-dry garbage sorting pilot scheme was launched in March 2003 in four housing estates in the Eastern District on Hong Kong Island. So far, the average amount of dry waste collected was about 1 tonne per day. The separated dry waste was sold to recyclers by tender, which proves that properly sorted recyclables have commercial value. The organization responsible for the pilot scheme has stepped up publicity work to encourage greater participation in the scheme. A review will be carried out upon completion of the pilot scheme in the first quarter of 2004 to examine the feasibility, logistics and cost-effectiveness of this form of waste recovery before deciding on the way ahead.

## 2.6 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.

#### A descriptive account of the initiative

During the three-month public consultation exercise held from 17 July to 18 October 2003, we held consultation meetings with and organized briefing sessions for the major stakeholders including green groups, academics, professional bodies and District Councillors. We also consulted this Panel, Heung Yee Kuk and relevant advisory committees including the Advisory Council on the Environment, the Town Planning Board, the Country and Marine Parks Board and the Wetland Advisory Committee. We also received over 150 written submissions. We are analyzing the views received with the objective of drawing up a more comprehensive nature conservation policy and a proposed programme by mid-2004 to implement the identified improvement measures to better achieve the nature conservation objective.

## 2.7 Initiative

Implementing incentive schemes 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 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 private diesel light bus owner is entitled to exemption of first registration tax if he replaces his light bus with an LPG or electric one. Up to now, about 80% of the newly registered public light buses have been LPG ones.

## 2.8 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.

### 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 removal devices on pre-Euro light diesel vehicles in 2001 and have started since end-2002 a similar installation programme for pre-Euro heavy diesel vehicles. As at end-2003, over 50% of the pre-Euro heavy diesel vehicles entitled to participate in the programme have been installed with particulate removal devices. The installation programme is expected to be completed in 2004. We will make the devices mandatory for these vehicles after the completion of the installation programme.

## 2.9 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.

A descriptive account of the initiative

We have been actively discussing with the Mainland authorities on the beneficial reuse of inert C&D materials in land formation projects in the Mainland. We will continue our collaboration with the relevant authorities and the construction industry in this regard.

2.10 Initiative

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

A descriptive account of the initiative

We are planning to consult the public in 2004 on the way forward for the remaining stages of HATS, taking into account the overall environmental and socio-economic benefits of the project against its cost and sewage charge implications.

**2003 Policy Agenda**

***Environmentally Responsible Development***

**New Initiatives**

3.1 Initiative

Introducing 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 as part of our current programme with the Guangdong Provincial Government to improve air quality in the Pearl River Delta Region.

Progress Made/Present Position

It is an on-going initiative in the 2004 Policy Agenda. Please refer to para.2.3 above.

### 3.2 Initiative

Implement the polluter pays principle and introduce a landfill 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 2004 Policy Agenda. Please refer to para.2.4 above.

### 3.3 Initiative

Introduce in 2003 a pilot scheme to test out the economics and logistics of wet-and-dry garbage sorting which, if successful, will be extended into large-scale domestic waste recycling as part of the overall integrated waste management programme. A benchmark for waste reduction will also be established.

#### Progress Made/Present Position

It is an on-going initiative in the 2004 Policy Agenda. Please refer to para.2.5 above.

### 3.4 Initiative

Promulgate in 2003 a comprehensive nature conservation policy including practicable measures to better conserve ecologically important habitats in close partnership with academics and non-governmental organizations (NGOs). Consider the introduction of a rating system for ecological values of different locations as well as benchmarking against other developed cities or states with similar climatic and physical conditions.

#### Progress Made/Present Position

We have completed a review on the existing nature conservation policy and conducted a three-month public consultation exercise between July and October 2003. The public consultation document has summarized the findings and recommendations of the review including a proposed scoring system for evaluating the relative ecological importance of different sites with the objective of identifying a list of priority sites for enhanced conservation, and two improvement measures to better conserve ecologically important sites under private ownership, viz. the management agreements option and the private-public partnership option. The review has also confirmed that Hong Kong compares favourably with other places at a similar stage of economic development in terms of either the share of protected areas or the



level of biodiversity. As regards the follow-up to the public consultation exercise, please refer to para.2.6 above.

### **On-going Initiatives**

#### **3.5 Initiative**

Implementing incentive schemes to encourage replacement of diesel taxis with LPG taxis by end-2003 and replacement of diesel light buses with LPG or electric light buses by end-2005.

##### Progress Made/Present Position

The incentive scheme for encouraging early replacement of diesel taxis with LPG taxis was completed at the end of 2003. Nearly all taxis are now run on LPG. For the progress of the programme to replace diesel light buses with LPG or electric light buses, please refer to para.2.7 above for more details.

#### **3.6 Initiative**

Promoting the installation of particulate traps and catalytic converters on pre-Euro diesel vehicles through provision of financial assistance and taking steps to introduce legislation to make the installation mandatory upon completion of retrofit programme.

##### Progress Made/Present Position

About 24,000 pre-Euro light diesel vehicles were retrofitted with particulate removal devices under an incentive programme that was completed in October 2001. With the support of the Legislative Council, we have made the installation mandatory for this type of vehicles since 1 December 2003. For the progress of installing catalytic converters on pre-Euro heavy diesel vehicles, please refer to para.2.8 above.

#### **3.7 Initiative**

Exploring opportunities to reuse inert construction and demolition materials outside Hong Kong.

##### Progress Made/Present Position

It is an on-going initiative in the 2004 Policy Agenda. Please refer to para.2.9 above.

### 3.8 Initiative

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.

#### Progress Made/Present Position

It is an on-going initiative in the 2004 Policy Agenda. Please refer to para.2.3 above.

### 3.9 Initiative

Concluding in 2003 trials and studies on the four options recommended by the International Review Panel (IRP) on the remaining stages of the Harbour Area Treatment Scheme, before public consultation in 2004.

#### Progress Made/Present Position

The majority of the trials and studies on the four options recommended by the IRP have been completed, including the compact sewage treatment technology trials and the environmental and engineering feasibility studies for the four IRP options. The studies confirmed that, while the four options should be technically feasible, it would be necessary to provide additional land (about 12 hectares) for the construction of the compact sewage treatment works. The capital cost for the remaining stages was estimated to be \$20-\$22 billion while the total recurrent cost for the full HATS would be \$1.5-\$1.8 billion per year, depending on the option to be adopted.

### 3.10 Initiative

Promoting the wider application of renewable energy (RE).

#### Progress Made/Present Position

We completed the Stage 1 of a two-stage consultancy study to investigate the feasibility of wider application of RE in Hong Kong in early 2003. The Stage 1 Study has revealed the potential of various forms of RE for wide-scale local use and related legal, institutional and promotional issues, and made recommendations for formulating an implementation strategy. We are continuing with the Stage 2 Study which is a design-and-build project involving the installation of different types of building-integrated photovoltaic (PV) panels in Wanchai Tower so as to assess their performance under Hong Kong's weather conditions until early 2004. We have secured the two power companies' undertakings to each plan and set up a pilot

production-scale wind turbine for public demonstration and evaluation purposes, as part of the outcome of the interim review of their Scheme of Control Agreements. We also continue to take the lead in exploiting RE in public works projects by successfully installing approximately 170,000W of power generating capacity using RE sources in various Government funded projects in 2003.

**Environment, Transport and Works Bureau**  
**January 2004**

**Enhanced Control Measures of the Hong Kong SAR**

<b>Measure</b>	<b>Implementation Programme</b>
Encourage the replacement of diesel light buses with light buses using cleaner fuels	Programme has started since the third quarter of 2002 to provide incentives to encourage early replacement of diesel light buses with ones that are run on liquefied petroleum gas (LPG) or electricity.
Require the retrofitting of particulate removal devices on pre-Euro diesel vehicles	Programme providing financial assistance to retrofit pre-Euro light diesel vehicles with particulate removal devices has been completed and the installation has been made mandatory for those vehicles. Programme providing financial assistance to retrofit pre-Euro heavy diesel vehicles is going on and is expected to complete by end-2004 following which the installation will be made mandatory for those vehicles.
Enhance the vapour recovery systems at petrol filling stations	To introduce proposed legislation into the Legislative Council in 2004 to require the recovery of petrol vapour emitted during vehicle refueling at petrol filling stations.
Tighten the motor fuel standards	To tighten the motor petrol standard to Euro IV by 2005 in parallel with European Union (the motor diesel standard has already been tightened to Euro IV since 2002).
Tighten vehicle emission standards	To tighten the motor vehicle emission standard for newly registered vehicles to Euro IV by 2006 in parallel with the European Union.
Reduce the emission of VOC from printing operations, paints and consumer products	To introduce proposed legislation into the Legislative Council in 2004/2005 to require the labelling of products with VOC contents.
	To introduce proposed legislation into the Legislative Council to reduce the use of products with a high VOC content and to develop VOC emission standards for printing operations.
Reduce emissions from power stations	Set up an effective and flexible mechanism (which may include emissions trading) to control the total emissions of SO <sub>2</sub> , NO <sub>x</sub> and RSP from power stations to achieve their respective reduction targets by 2010.

## Enhanced Control Measures of Guangdong Province

Measure	Implementation Programme
Use cleaner energy	To achieve by 2005 the energy consumption rate of 0.85 tonne standard coal per 10,000 yuan of GDP. To construct by 2010 an energy production and supply system that is safe, stable, economical, efficient and clean.
	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 3 million tonnes/year and to finish construction of a number of LNG power plants.
	To upgrade by 2005 the 500kV dual circuit annular core transmission grid to cater for the transmission of electricity from western provinces.
Control the sulphur contents of fuels	To restrict 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.
Reduce emissions from coal-fired and oil-fired power stations	To close down small power generation units. After implementation of this measure, the power generation units of capacity above 300MW will make up more than 70% of the total installed generation capacity of the Region by 2005 – an increase by 35% as compared with 2000.
	To finalise by 2005 plans for installing flue gas desulphurization systems at power plants in Shajiao, Huangpu, Taishan and Zhuhai.
	To require all oil-fired and coal-fired power generation units of capacity above 125MW to be equipped with flue-gas desulphurization systems by 2007.

Control emissions from industrial boilers and industrial processes	To phase out coal-fired boilers of capacity less than 2 tonnes/hour in the urban areas of cities. By 2005, to prohibit the use of coal-fired boilers of capacity below 2 tonnes/hour in the built-up areas of major cities, and to require all large and medium-size industrial boilers to install desulphurization systems or adopt clean combustion technologies to reduce emissions.
	To continue to phase out various production technologies or installations that cause serious pollution by emitting sulphur dioxide, smoke and particulates.
Reduce the emission of VOC from paints	To replace paints using VOCs like Xylene as solvents.
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-Changping Express Trunk Road.
	To develop green transport by implementing clean vehicle action programmes 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.
	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.