

**Pearl River Delta Regional Air Quality Management Plan  
Enhanced Control Measures of  
Hong Kong Special Administrative Region**

<b>Measures</b>	<b>Implementation Programme</b>	<b>Progress</b>
Encourage 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.	<p>The incentive scheme was introduced in August 2002 and completed by 31 December 2005.</p> <p>As at the end of November 2008, there were 2 607 public LPG light buses, accounting for 60% of the entire public light bus fleet.</p>
Require retrofitting of particulate removal devices on pre-Euro diesel vehicles	With effect from 1 April 2007, pre-Euro diesel vehicles have to be installed with approved particulate removal devices.	<p>Financial assistance was provided in phases from December 2002 to December 2005 to retrofit pre-Euro heavy-duty diesel vehicles with catalytic converters. All together, about 36 500 eligible vehicles were installed with catalytic converters.</p> <p>Since April 2006, all pre-Euro heavy-duty diesel vehicles (including franchised buses), except those operate under long idling situations (including lorries with cranes mounted, concrete mixers, pressure tankers and gully emptiers), were required to be installed with approved emission reduction devices. This requirement was extended to the “long-idling” vehicles since April 2007.</p>
Encourage vehicle owners to replace pre-Euro and Euro I commercial diesel vehicles with Euro IV models	Since 1 April 2007, the Government has offered 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 10 636 applications have been approved (as at the end of December 2008).

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Encourage members of public to use environmentally friendly private petrol vehicles	With effect from 1 April 2007, a 30% reduction in the First Registration Tax (FRT) was offered to the purchasers of environment-friendly private petrol vehicles, subject to a cap of \$50,000 per vehicle.	A total of 6 763 environment-friendly private petrol vehicles were covered under the scheme (as at the end of December 2008).
Encourage use of environment-friendly commercial vehicles	(New item included in 2008) With effect from 1 April 2008, a reduction in FRT would be offered to the purchase of environment-friendly commercial vehicles.	A total of 196 environment-friendly commercial vehicles were approved under the scheme (as at the end of December 2008).
Require drivers to switch off idling vehicles with running engines	To require drivers to switch off idling vehicles with running engines.	After considering the outcome of the public consultation, the Government will put together a revised proposal to introduce a statutory ban on idling vehicles with running engines. We will consult the Panel on Environmental Affairs in January 2009.
Strengthen control of emissions from petrol and LPG vehicles	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.	The Government will commence the consultation in 2009.
Tighten emission standard for in-use diesel vehicles	(New item included in 2008) To study the further tightening of dark smoke emission standard for in-use diesel vehicles.	A proposal will be prepared for consultation with the transport trades in 2009.
Enhance vapour recovery systems in petrol filling stations (Item completed)	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. Since 31 March 2008, all petrol filling stations have been retrofitted with such systems to recover petrol vapour emitted during refuelling.

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Tighten motor fuel standard	The motor fuel standard were tightened to the Euro IV standard by 2005 (the motor diesel standard has already been tightened to the Euro IV standard since 2002).	The Euro IV petrol standard came into effect on 1 January 2005.
	To introduce the supply of motor vehicle fuels meeting the Euro V standard.	With effect from 14 July 2008, the duty rate for Euro V motor vehicle diesel has been waived to encourage the early supply of more environment-friendly fuels on the local market.
	(New item included in 2008) To develop specifications and regulations on the use of biodiesel as vehicle fuel in Hong Kong.	The Government is now consulting the trades on the draft biodiesel specifications and regulatory framework for preparing the enabling legislation for implementation in 2009.
Tighten emission standard for newly registered vehicles	The Euro IV emission standard was adopted since 2006.	The Euro IV emission standard was introduced on 1 January 2007 for all newly registered vehicles.
	To follow the European Union in adopting the Euro V motor vehicles standard for tailpipe emissions.	We are consulting vehicle suppliers about the availability of Euro V compliant models for Hong Kong market.
Use of cleaner fuels by ferries	To look into the use of cleaner fuels by local ferries.	The Government set up an inter-departmental working group in December 2007 to develop a trial scheme on the use of ultra low sulphur diesel (“ULSD”) (sulphur content not more than 0.005%) by local ferries. The scheme is expected to commence in 2009. Subject to the trial result, the Government would draw up options to encourage local ferry operators to switch from using high sulphur diesel (sulphur content not more than 0.5%) to ULSD. The move will reduce sulphur dioxide and suspended particulates emissions from each vessel by about 99% and 10% respectively.

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Control emissions from off-road mobile sources operating within airport and ports	(New item included in 2008) To draw up measures to control emissions from off-road mobile sources operating within the airport and ports (including mobile machinery and vehicles). Measures will include the statutory emission standards for mobile machinery.	We plan to consult the relevant trades in 2009.
Reduce volatile organic compounds (VOC) emissions from printing process, paints and consumer products	To introduce legislation in 2004 or 2005 to require the labeling of VOC content on VOC products.  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.	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.  We plan to amend the Air Pollution Control (Volatile Organic Compounds) Regulation in mid-2009 to extend the control to cover vehicle refinishing paints, marine vessel paints/coatings, adhesives and sealants.
Reduce emissions from power stations	Effective and flexible mechanisms will be set up to control the total emissions of SO <sub>2</sub> , nitrogen oxides (NO <sub>x</sub> ) and respirable suspended particulates 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 will provide desulphurization and denitrification systems for four of its coal-fired generating units each of 677MW. HEC will provide low-NO <sub>x</sub> burners and desulphurization systems for two of its coal-fired generating units each of 350MW and a desulphurization system for a coal-fired generating unit of 250MW.  CLP has been increasing the use of ultra low sulphur coal. 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.

<b>Measures</b>	<b>Implementation Programme</b>	<b>Progress</b>
	<p>To control total emissions from power plants and allow emission trading.</p>	<p>Emission caps have been included in the Special Process Licences 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. The caps will gradually be tightened with a view to reducing emissions for achieving the 2010 reduction targets.</p> <p>The Air Pollution Control (Amendment) Ordinance 2008 was enacted in July 2008. The emission caps for the power plants in Hong Kong in 2010 and beyond will be specified in the Technical Memorandum, which has come into effect in December 2008. Power plants are also allowed to conduct emission trading as an alternative means for compliance with the emission caps.</p>
	<p>(New item included in 2008) To promote the wider use of clean fuels.</p>	<p>In August 2008, the Government reached a consensus with the National Energy Administration and the National Development and Reform Commission on the continuous supply of nuclear electricity and natural gas to Hong Kong in the coming two decades. A Memorandum of Understanding was signed. It was agreed in principle that the feasibility of supplying natural gas to Hong Kong via the planned Second West-East Natural Gas Pipeline would be studied, and that the Central People's Government would jointly build with Hong Kong a natural gas terminal on the Mainland for supplying natural gas to Hong Kong, with a view to promoting wider use of clean fuels and reducing emissions from power plants.</p>
<p>Reduce emissions from industrial and commercial processes</p>	<p>To mandate the use of ULSD in industrial and commercial processes.</p>	<p>The Government completed the legislative process of the Air Pollution Control (Fuel Restriction) (Amendment) Regulation, which came into effect on 1 October 2008.</p>
<p>Enhance energy efficiency of buildings</p>	<p>To consult the public on the proposal to introduce mandatory implementation of the Building Energy Codes (BEC).</p>	<p>Public consultation on the proposal of mandatory implementation of BECs was completed on 31 March 2008. The Government is preparing the necessary legislative proposal by taking into account</p>

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		comments received during the public consultation.
Mandatory Energy Efficiency Labelling Scheme	To launch the Mandatory Energy Efficiency Labelling Scheme.	The Legislative Council passed the Energy Efficiency (Labelling of Products) Ordinance. The first phase of the Mandatory Energy Efficiency Labelling Scheme will be implemented in November 2009. The Government will make preparation for the amendments to the Energy Efficiency (Labelling of Products) Ordinance for the second phase of the scheme to cover additional appliances.
Encourage to adopt cleaner production technologies and processes	A five-year programme to be launched to give professional and technical support to Hong Kong-owned factories in the PRD Region to adopt cleaner production technologies and practices.	The Government launched the “Cleaner Production Partnership Programme” in April 2008 to engage Hong Kong-owned factories in the PRD Region to adopt cleaner production technologies and practices in the coming five years.

**Environment Bureau**  
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