For Information
January 2012

LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS
SUBCOMMITTEE ON IMPROVING AIR QUALITY

Progress of Measures under Pearl River Delta Regional Air Quality Management Plan

Purpose

This paper reports on the latest progress of implementation of measures, including those under the Pearl River Delta Regional Air Quality Management Plan (Management Plan), to improve air quality.

Background

2. To improve regional air quality, the Hong Kong Special Administrative Region (SAR) Government reached a consensus with the Guangdong Provincial Government in April 2002 to reduce, on a best endeavour basis, the emissions of four major air pollutants, namely sulphur dioxide (SO_2), nitrogen oxides (NO_x), respirable suspended particulates (RSP) and volatile organic compounds (VOC) by 40%, 20%, 55% and 55% respectively in the Pearl River Delta (PRD) Region by 2010, using 1997 as the base year.

3. Since September 2005, we have been providing biannual reports to the Panel on Environmental Affairs (EA Panel) on the progress of meeting the 2010 emission reduction targets. This report provides an update of development up to November 2011.

Emission Reduction Achieved

4 We are now estimating the emissions of Hong Kong in 2010 and expect the work to be completed in the first half of 2012. The figures of 2009 show that with the implementation of local control measures, the emission of the four major air pollutants has decreased by 24% to 58% from 1997 to 2009 (details in table below). Following the commencement of operation of additional emission reduction facilities for the coal-fired power units of the two local power companies as planned in 2010, we expect that Hong Kong could fully achieve the 2010 emission reduction targets.

	Emission Level in 1997 (Tonnes)	Change in Emission Level during 1997-2009[1]	2010 Emission Reduction Target
SO_2	66,200	-24%	-40%
NO_x	124,000	-32%	-20%
RSP	11,500	-57%	-55%
VOC	68,800	-58%	-55%

Latest Measures to Reduce Emissions from Major Sources

Transport Sector

5. To further step up efforts in reducing emissions from the local transport sector, we have rolled out the following major initiatives –

(a) to encourage the transport sector to try out green and innovative transport technologies, the $300 million Pilot Green Transport Fund has been set up and in operation since March 2011. Up to November 2011, 34 applications were received. We have approved 13 applications, which include trials of electric non-franchised buses and electric goods vehicles. The amount of subsidies granted total about $50 million. All the successful applicants have signed agreements with the Government and started preparing for the trials. We expect that the trials would commence in 2012;

(b) the Financial Committee of the Legislative Council (LegCo) has approved the allocation of $33 million to fund the full cost of procuring six hybrid buses for trial by franchised bus companies along busy corridors. The franchised bus companies are in the process of procuring suitable hybrid buses for the trial. Taking into account the time needed for the tender exercise, production and delivery, we expect that the trial could commence in 2013. On the other hand, we propose to earmark $180 million for franchised bus companies to purchase 36 electric buses for trial, in order to assess their performance on different routes and in different conditions. If results of the trial are satisfactory,

[1] The percentage changes in emission levels between 1997 and 2009 are preliminary figures. EPD has recently conducted comprehensive studies on the methods of estimating emissions from various sources such as vessels and vehicles. We will adopt the latest emission estimation methods in assessing the emission figures for Hong Kong in 2010 and re-calculating the emission figures for previous years with a view to estimating the reduction in emission level in 2010.

the Government will encourage the franchised bus companies in a suitable way to use electric buses on a larger scale, taking into account the affordability for the bus companies and passengers. The Government is discussing with the franchised bus companies on details of the trials;

(c) the trial of retrofitting Euro II and III franchised buses with selective catalytic reduction (SCR) devices commenced in September 2011. We shall review the initial results after the first six months of the trial. Subject to satisfactory trial results, the Government will fully subsidize the bus companies to retrofit SCR devices on all Euro II and III franchised buses;

(d) regarding the designation of pilot low-emission zones for franchised buses along busy corridors in Causeway Bay, Central and Mong Kok, the franchised bus companies have, on request by the Government, increased as far as possible the ratio of low-emission franchised buses (i.e. those meeting the emission level of a Euro IV bus or above) running in these zones from 2011. Our target is to have only low-emission franchised buses in these zones by 2015;

(e) the Motor Vehicle Idling (Fixed Penalty) Ordinance has come into operation in mid-December 2011. Pursuant to the Ordinance, drivers must switch off idling vehicle engines when waiting, in order to reduce air pollution, heat and noise nuisance;

(f) in view of improvements in the supply of Euro V vehicles to the local market, the Government has proposed introducing the Euro V vehicle emission standards as the statutory requirement on exhaust emissions for newly registered vehicles starting from June 2012. We have consulted the transport trades and the Panel on our proposal and have their support. We are now making preparation to amend the relevant subsidiary legislation for implementing the proposal;

(g) in respect of the proposal to strengthen control of emissions from petrol and liquefied petroleum gas vehicles, which includes using roadside remote sensing equipment and dynamometer for emission testing, we have consulted the Panel in November 2011 and are consulting the transport trades and stakeholders. We plan to report to the Panel on the findings of the consultation and the finalized scheme in the first quarter of 2012; and

(h) the Policy Address delivered in October 2011 put forward an intiative to explore with the governments of Guangdong, Shenzhen and Macao the feasibility of requiring ocean-going vessels (OGV) to switch to low-

sulphur diesel at berth and setting up an Emission Control Area in the longer term, as well as to study in collaboration with the trades feasible ways to improve the quality of vessel fuels sold locally. We have sought the Panel's views and are actively pursuing the proposals, including consulting the trades and discussing with the relevant authorities of the mainland on how to take forward these initiatives.

6. In addition to the above, we have been implementing the following measures to promote the wider use of more environment-friendly vehicles –

(a) since April 2007, we have been providing a reduction in First Registration Tax (FRT) to encourage the use of environment-friendly private cars. The FRT reduction rate has been raised from 30% to 45%, subject to a cap which has been increased from $50,000 to $75,000 per car. As at end-November 2011, we have approved 27,626 applications. Since the introduction of the scheme, environment-friendly private cars account for about 16% of first-registered private cars;

(b) since April 2008, we have reduced the FRT of environment-friendly commercial vehicles (currently pitched at the Euro V standards) to encourage early take-up of these vehicles. As at end-November 2011, we have approved 5,619 applications;

(c) since June 2010, businesses may claim 100% deduction under profit tax in respect of the capital expenditure incurred for purchasing environment-friendly vehicles. The new tax concession is applicable as from the year of assessment 2010/11;

(d) since July 2010, we have been providing a one-off grant to encourage vehicle owners to replace their Euro II diesel commercial vehicles early by new ones compliant with the prevailing statutory emission standards. As at end-November 2011, we have approved 2,437 applications, accounting for about 9% of the eligible vehicles.

(e) to provide incentives for vehicle buyers to choose electric vehicles (EV), we have extended the waiver of FRT for EVs for a period of five years till end-March 2014; and

(f) we have been in close liaison with EV suppliers, encouraging them to bring more EV models to the Hong Kong market. There are already different types of EVs available in Hong Kong, including private cars and commercial vehicles. We have also been expanding our EV charging infrastructure to promote the wider adoption of EVs. By the

end of 2011, standard charging facilities in the 18 districts have exceeded 330 in number and will continue to increase. The Government is also working on installing some 500 standard chargers at various Government car parks. By mid-2012, we expect that there will be altogether some 1,000 standard EV chargers for use by the public.

Power Sector

7. Power generation is a major source of air pollutant emissions in Hong Kong. To achieve emission reduction, we have imposed emission caps on all power plants since 2005 and are progressively tightening them during licence renewals. We further brought the Air Pollution Control (Amendment) Ordinance 2008 through LegCo in July 2008 to give statutory effect to the emission caps for power plants in 2010 and beyond through a Technical Memorandum (TM). Stringent emission caps for 2010 were subsequently imposed on the two power companies through the First TM promulgated in December 2008.

8. In 2010, we reviewed the First TM and tightened the emission caps for the power sector from 2015 onward by maximizing the use of existing gas-fired generation units and prioritizing coal-fired generation units retrofitted with emission abatement facilities. The Second TM was promulgated in December 2010. Compared with the First TM, it further reduces the emission allowance for SO_2, NO_x and RSP by about 50%, 35% and 34% respectively.

9. To encourage Hongkong Electric (HEC) and CLP Power (CLP) to take further steps to reduce emissions and sustain strict compliance with the environmental requirements, we set out a number of incentives and penalty arrangements in the Scheme of Control Agreements signed with them in January 2008. These arrangements include –

(a) linking the permitted rate of return of the two power companies to their compliance with the emission caps. A higher rate of return will be provided for emissions lower than the caps. Likewise, there are financial disincentives in terms of a lower rate of return for emitting more pollutants than permissible; and

(b) providing a higher rate of return to the power companies for their investment in renewable energy facilities and offering them a bonus in permitted return depending on the extent of renewable energy usage in their electricity generation.

10. Other major progress in reducing emissions from the power sector include the following –

(a) in August 2008, the Hong Kong SAR Government signed a Memorandum of Understanding on Energy Co-operation with the National Energy Administration to ensure a stable and long-term supply of nuclear electricity and natural gas from three different sources, namely offshore gas, piped gas and liquefied natural gas. In 2010, natural gas accounted for 30%[2] of fuel mix for power generation in Hong Kong;

(b) on promotion of renewable energy, the two power companies have proceeded with the preparation work for the collection of technical data on-site as well as the feasibility study of their off-shore wind farm projects. Besides, HEC had commissioned a 550 kW thin film photovoltaic system in July 2010 on the roofs of the power station buildings to increase the use of renewable energy; and

(c) both HEC and CLP have completed retrofitting emission reduction facilities for their coal-fired generation units as planned and these facilities are in full operation to help the two power companies comply with the 2010 emission caps.

Other Sources

11. We are also implementing the following major initiatives to control emissions from other sources –

(a) we amended the Air Pollution Control (Volatile Organic Compounds) Regulation (Chapter 311W) in October 2009 to extend the control to other products, including adhesives, sealants, vehicle refinishing paints, marine vessel paints and pleasure craft paints, to limit their VOC contents in phases from January 2010; and

(b) we have conducted consultation on a proposal to control emissions from non-road mobile sources, which include mobile fuel-powered machinery widely used at the airport, container terminals and construction sites. We shall initiate the necessary legislative procedures (including consulting the EA Panel) in 2012 for implementing the scheme.

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[2] The figure includes nuclear power generation from Daya Bay.

Air Quality Objectives (AQOs) Review

12. We reported the findings of public consultation on the AQOs Review to the EA Panel in June 2010. We further reported to the Panel's Subcommittee on Improving Air Quality in July 2010 the key considerations in taking forward the recommended air quality improvement measures and the progress made on those measures for which concrete implementation programmes have been drawn up. Taking effective measures to reduce the emission of air pollutants is essential to improving our air quality. In updating the AQOs, we need to formulate additional air quality improvement measures for achieving the proposed new AQOs. The two are closely connected and equally important as part of the air quality management strategy. We are now finalizing the proposal for updating the AQOs with a view to submitting it to the LegCo shortly for discussion. Meanwhile, we are taking active steps to introduce further measures to reduce emissions from various sources, including those set out in this paper.

Promotion of Energy Efficiency

13. Apart from the above, another effective way of reducing emissions is through enhancing energy efficiency and promoting energy conservation. In this regard –

(a) in November 2010, the Buildings Energy Efficiency Bill passed into legislation to improve energy efficiency in new and existing buildings by mandating compliance with the Building Energy Codes. The Buildings Energy Efficiency Ordinance will commence full operation by September 2012;

(b) we are continuing to implement the buildings energy efficiency funding schemes, with $450 million allocated from the Environment and Conservation Fund, to subsidize qualified building owners in carrying out energy-cum-carbon audits and energy efficiency projects. The schemes have been opened for application since April 2009. As at end-December 2011, we have approved more than 790 funding applications (amounting to more than $300 million);

(c) we have adopted a comprehensive target-based green performance framework for government buildings and set targets in various environmental aspects to promote environmental protection and energy conservation. We will also promote the use of energy efficient designs and technologies by means of demonstration projects;

(d) phases I and II of a district cooling system at the Kai Tak Development are under construction to supply chilled water to buildings in the region

for centralized air-conditioning;

(e) we introduced a mandatory Energy Efficiency Labelling Scheme through the Energy Efficiency (Labelling of Products) Ordinance (Chapter 598) to encourage the use of energy-efficient products. The two phases of the scheme cover five types of product, namely room air conditioners, refrigerating appliances, compact fluorescent lamps, dehumidifers and washing machines);

(f) we are promoting the replacement of incandescent light bulbs by energy-efficient lighting installations through various means. We have consulted the public on progressively restricting the sales of energy-inefficient incandescent light bulbs through legislation, and are consolidating public responses; and

(g) we will soon promulgate the "Guidelines on Industry Best Practices for External Lighting Installations" to encourage voluntary actions to minimize nuisance and energy wastage of external lighting. Moreover, we set up the Task Force on External Lighting in August 2011 to advise on the development of technical standards and parameters for external lighting specific to local circumstances, as well as the way forward in handling external lighting issues. We will take follow-up actions to address public concerns on external lighting having regard to the advice of the Task Force.

Co-operation with Guangdong Province and Mainland

14. To continue improving the air quality in the Pearl River Delta Region, the Guangdong Provincial Government is working in earnest to implement the emission reduction measures under the Management Plan, which focus on power plants, motor vehicles and the more polluting industrial processes. Key initiatives include the following –

(a) continuing to take forward installation of low-NOx and denitrification systems at thermal power plants, and requiring all large scale coal-fired power plants in the PRD region to complete the installation by the end of 2013;

(b) continuing to phase out highly polluting industrial boilers in the PRD region;

(c) controlling emissions of volatile organic compounds from enterprises. A registration and reporting system on the usage and emission control of organic solvents at PRD major enterprises was set up in May 2011;

(d) supplying National IV standard petrol in the PRD region incrementally. Apart from Guangzhou and Shenzhen, National IV standard petrol is supplied also in Dongguan starting from August 2011;

(e) promoting green freight trade by offering rebates to transportation companies for procuring and installing energy saving facilities; and

(f) developing regional speed light-rail system to reduce usage of motor vehicles. For examples, the Guangzhou-Zhuhai Intercity Railway started operation in January 2011.

15. The progress of emission reduction measures implemented by the governments of Guangdong and Hong Kong under the Management Plan are detailed in Annexes A and B. The two governments are conducting a final assessment of the delivery of the 2010 emission reduction targets. On the basis of the final assessment, the two sides will strive to complete within the first quarter of 2012 a joint study on emission reduction arrangements for the PRD Region in the next phase, in order to improve the regional air quality further.

16. Furthermore, we are working on the following joint initiatives with the relevant authorities in Guangdong to improve the regional environment –

(a) continuing implementation of the five-year Cleaner Production Partnership Programme with the Economic and Information Commission of Guangdong Province. The objective is to encourage and facilitate Hong Kong-owned factories operating in the PRD Region to adopt cleaner production technologies and practices, thereby reducing emissions and enhancing energy efficiency. As at end-November 2011, more than 1,670 applications have been approved under the Programme. In addition, the two sides have jointly presented "Hong Kong/Guangdong Cleaner Production Partner" commendation to 139 enterprises in October 2011 in recognition of their efforts in pursuing and promoting cleaner production;

(b) in October 2011, both sides jointly released a report on the monitoring results of the PRD Regional Air Quality Monitoring Network for the first half of 2011. We aim to publicize the report covering the whole year of 2011 in April 2012; and

(c) we have initiated discussion with the Environmental Protection Bureau and Maritime Safety Administration of Guangdong on controlling emissions from OGVs. Our aim is to mandate, through legislation on both sides, OGVs to switch to low-sulphur diesel when berthing in PRD waters, and to set up an Emission Control Area in the longer term. We are actively liaising with relevant authorities of the mainland to follow up on detailed studies.

17. Members are invited to take note of the above information.

Environment Bureau / Environmental Protection Department
January 2012

Annex A

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

Measure	Implementation Programme	Progress (Up to 30 November 2011)
Encourage replacement of diesel light buses with ones using clean fuel (Item completed)	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 in December 2005. A total of 2,390 public diesel light buses were replaced by LPG ones during the period, accounting for approximately 55% of the entire public light bus fleet.
Require retrofitting of particulate removal devices on pre-Euro diesel vehicles (Item completed)	Since April 2007, pre-Euro diesel vehicles have to be installed with approved particulate removal devices.	Since April 2007, all pre-Euro diesel vehicles were required to be installed with approved emission reduction devices. Otherwise, their licences will be cancelled or cannot be renewed.
Retrofit Euro II and Euro III franchised buses with selective catalytic reduction (SCR) devices	To study the feasibility of retrofitting Euro II and Euro III franchised buses with SCR devices	The trial of retrofitting Euro II and III franchised buses with SCR devices has commenced in September 2011. We plan to report the initial trial results to the Subcommittee in around mid-2012. Subject to satisfactory trial results, we will fund the capital costs for installing SCR devices on all Euro II and Euro III franchised buses.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
Encourage vehicle owners to replace pre-Euro and Euro I commercial diesel vehicles with Euro IV models (Item completed)	An incentive scheme was introduced in the second quarter of 2007.	From April 2007 to March 2010, the Government offered a one-off grant to vehicle owners to encourage the early replacement of pre-Euro and Euro I diesel commercial vehicles with new ones compliant with the statutory emission standards for newly registered vehicles (which is the Euro IV emission standard currently). Since the introduction of the scheme, the number of on-road pre-Euro and Euro I diesel commercial vehicles has decreased from about 59,000 in 2007 to about 33,000 in 2011 (i.e. by about 45%).
Encourage vehicle owners to replace Euro II commercial diesel vehicles with Euro IV models	An incentive scheme was launched in July 2010.	From July 2010 till June 2013, the Government will provide a one-off grant to vehicle owners to encourage the early replacement of Euro II diesel commercial vehicles with new commercial vehicles compliant with the statutory emission standards for newly registered vehicles (which is the Euro IV emission standard currently). As at end-November 2011, grants have been approved for the replacement of 2,437 commercial diesel vehicles, accounting for about 9% of the eligible vehicles. The grants total about $210 million, which is about 40% of the allocated budget.
Encourage members of public to use environment-friendly private petrol vehicles	Since 1 April 2007, a reduction in the First Registration Tax (FRT) has been offered to purchasers of environment-friendly private petrol vehicles.	Since June 2011, the rate of FRT reduction for environment-friendly private petrol vehicles has been raised from 30% to 45%, subject to a cap which has been increased from HK$50,000 to HK$75,000 per vehicle. As at end-November 2011, FRT reduction for 27,626 environment-friendly private petrol vehicles has been approved under the scheme.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
Encourage use of environment-friendly commercial vehicles	Since 1 April 2008, a reduction in FRT has been offered to purchasers of environment-friendly commercial vehicles.	As at end-November 2011, FRT reduction for 5,619 environment-friendly commercial vehicles has been approved under the scheme.
Encourage the use of electric vehicles (EVs)	Since 2009, a series of measures was introduced to promote the use of EVs in Hong Kong.	FRT for EV is waived for a period of five years till March 2014. In addition, we allow an accelerated tax deduction for capital expenditure on environment-friendly vehicles including EVs, so that enterprises can enjoy a 100% profits tax deduction in the first year of the vehicle procurement. We now have about 220 EVs on the roads in Hong Kong. The Government has also announced a planned intake of about 200 EVs in two years. As regards the EV charging infrastructure, standard charging facilities in the 18 districts have exceeded 330 in number and will continue to increase. Besides liaison and encouragement for installing EV chargers in private car parks, the Government is also working on installing some 500 standard chargers at Government car parks. By mid-2012, we expect that there will be altogether some 1,000 standard EV chargers for use by the public.
Encourage the use of zero emission or more environment-friendly franchised buses	To test the operational efficiency of hybrid buses.	The Finance Committee of LegCo has approved the allocation of $33 million to fund the full cost of procuring six hybrid buses for trial by franchised bus companies along busy corridors. The franchised bus companies are in the process of procuring suitable hybrid buses for the trial. Taking into account the time needed for the tendering exercise, production and delivery, we anticipate that the trial could commence in 2013.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
	To study the feasibility of adopting electric buses.	The Government has proposed to earmark $180 million for franchised bus companies to purchase 36 electric buses for trial on various routes, in order to assess the performance of these buses on different routes and in different conditions. We are discussing with the franchised bus companies on details of the trials and shall seek funding approval from LegCo as soon as possible.
Encourage testing of low-emission and low-carbon transport technologies	A HK$300 million Pilot Green Transport Fund was set up in 2011.	The Government set up a $300 million Pilot Green Transport Fund in March 2011 to encourage the transport sector to test out green and innovative transport technologies. By the end of November 2011, 34 applications were received. We have approved 13 applications, which include trials of electric non-franchised buses and electric goods vehicles, with grants totaling about $50 million. All the successful applicants have signed agreements with the Government and started preparing for the trials. It is anticipated that the trials could commence in 2012.
Require drivers to switch off idling vehicle engines	To implement the Motor Vehicle Idling (Fixed Penalty) Ordinance after the passage of the relevant subsidiary legislation.	The Motor Vehicle Idling (Fixed Penalty) Ordinance takes effect from 15 December 2011. Idling vehicles with running engines is prohibited.
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.	With respect to the proposal to strengthen emission control on in-use petrol and LPG vehicles, we have consulted the Panel in November 2011 and are gathering views on the proposal from the transport trades and stakeholders. We plan to report to the Panel in the first quarter of 2012 on the outcome of the consultation and the finalized scheme of strengthened emission control.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
Tighten emission standard for in-use diesel vehicles	To study the further tightening of dark smoke emission standard for in-use diesel vehicles.	The Government is studying the matter and will consult the transport trades when ready.
Enhance vapour recovery systems in petrol filling stations (Item completed)	In 2004, the Air Pollution Control (Petrol Filling Stations) (Vapour Recovery) Regulation was amended to require the recovery of petrol vapour emitted during vehicle refuelling at petrol filling stations, with effect from March 2005.	Since March 2005, all newly built petrol filling stations have to be installed with vapour recovery systems. Since March 2008, all petrol filling stations have been retrofitted with such systems to recover petrol vapour emitted during refuelling.
Tighten motor fuel standard	To introduce the supply of motor vehicle fuels meeting the Euro V standard. (Item completed)	In July 2010, the Euro V motor vehicle fuel (including diesel and unleaded petrol) standards came into effect.
	To develop specifications and regulations on the use of biodiesel as vehicle fuel in Hong Kong. (Item completed)	In July 2010, the regulatory control on motor vehicle biodiesel came into effect. The regulation sets out the specifications for pure motor vehicle biodiesel and the requirements for motor vehicle biodiesel blends. It also requires that labels be posted at the selling points if the biodiesel content in a motor vehicle biodiesel blend exceeds 5%.
Tighten emission standard for newly registered vehicles	To follow the European Union (EU) in adopting the Euro V motor vehicles standard for tailpipe emissions.	The Government has consulted the transport trades and the Panel on the proposal to introduce the Euro V standard as the statutory vehicle exhaust emission standard for newly registered vehicles in June 2012. The proposal is supported. We are now making preparations for amending the relevant subsidiary legislation in order to implement the proposal.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
Designate pilot low-emission zones (LEZs)	To examine the feasibility of setting up pilot LEZs at busy corridors to restrict franchised buses with high exhaust emissions from entering the zones.	The Chief Executive put forward in the Policy Address in 2010 an initiative to designate pilot low-emission zones (LEZs) for franchised buses in busy districts such as Causeway Bay, Central and Mong Kok. In response to the Government's request, the franchised bus companies have increased as far as possible the ratio of low-emission buses (i.e. those meeting the emission level of a Euro IV bus or above) running in these zones from 2011. Our target is to have only low-emission buses along these busy corridors by 2015.
Use of cleaner fuels by ferries	To look into the use of cleaner fuels by local ferries.	Between 2009 and 2010, the Government completed a trial of powering local ferries with ultra low sulphur diesel (ULSD, with a sulphur content not exceeding 0.005%). The findings show that upgrading the quality of marine fuel across-the-board is more cost-effective and practicable than requiring particular types of vessels to use ULSD. We will consult stakeholders about upgrading the quality of marine diesel sold locally.
Control emissions from non-road mobile sources	To draw up a scheme to control the emissions of non-road mobile sources, with a view to starting the legislative process in 2012.	In June 2011, the Government has put forth for consultation a revised proposal for bringing non-road mobile sources of emissions under statutory control. We are drawing up a legislative proposal with reference to findings of the consultation. The legislative process required for introducing the control regime is scheduled to commence in 2012.
Reduce volatile organic compounds (VOC) emissions from printing process and VOC content in regulated	To introduce legislation to require the labelling of VOC content on VOC products. (Item completed)	Since April 2007, the Government has enforced the Air Pollution Control (Volatile Organic Compounds) 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

Measure	Implementation Programme	Progress (Up to 30 November 2011)
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.	heatset printing machines are also required to be installed with emission control devices. In October 2009, the Regulation was amended to extend the control to adhesives, sealants and vehicle refinishing paints, as well as vessel and pleasure craft paints. The extended control has been introduced in phases since January 2010.
Reduce emissions from power stations	Effective and flexible mechanisms will be set up to control the total emissions of sulphur dioxide (SO_2), NOx and respirable suspended particulates (RSP) from power stations to achieve respective emission reduction targets by 2010. (Item completed)	CLP Power Hong Kong Limited (CLP) has completed in January 2011 the installation of flue gas desulphurization (FGD) systems and denitrification systems for four of its coal-fired generating units of 2,700MW in total. CLP has also been increasing the use of ultra low sulphur coal. Hong Kong Electric Co. Ltd. (HEC) has also completed in March 2010 the installation of low-NOx burning systems and/or FGD systems for three coal-fired generating units of 950MW in total. HEC's first natural gas generation unit of 335MW was commissioned in October 2006. In 2008, HEC successfully converted an oil-fired combined cycle unit to a gas-fired unit; it has been running on gas in base-load mode since 2010.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
	To control total emissions from power plants and allow emission trading. (Item completed)	Since August 2005, emission caps have been set and tightened progressively during the renewal of Special Process Licences (SPLs), with a view to reducing emissions for achieving the 2010 emission reduction targets. In July 2008, the Air Pollution Control Ordinance was amended, to provide for the stipulation of emission caps for the power plants in Hong Kong in 2010 and beyond in the Technical Memorandum for Allocation of Emission Allowances in respect of Specified Licences (TM). Power plants are also allowed to conduct emission trading as an alternative means to comply with the emission caps. The Government promulgated the first TM in December 2008. It provides a clear statutory framework for imposing the 2010 emission caps on the power companies.
	To further reduce power plant emissions in 2015 and beyond.	In December 2010, the Government promulgated the Second TM to substantially tighten the emission caps on power plants in 2015 and beyond (with the caps of SO_2, NOx and RSP lowered by 50%, 35% and 34% respectively.
	To promote the wider use of clean energy.	The Memorandum of Understanding (MOU) signed between the Government and the National Energy Administration in August 2008 ensures a continuous supply of nuclear electricity and natural gas to Hong

Measure	Implementation Programme	Progress (Up to 30 November 2011)
		Kong in the coming two decades, with a view to promoting wider use of clean fuels and reducing emissions from power plants. After signing the MOU, the governments and energy enterprises on both sides have followed up on its implementation. The Central Government announced in August 2011 that the construction of the Hong Kong branch of the Second West-East Gas Pipeline would be expedited such that the supply of natural gas through the pipeline to Hong Kong would commence in the latter half of 2012. The LPG terminal in Shenzhen to be jointly constructed by energy enterprises of both sides is also pursued closely. The two power companies have proceeded with their respective preparations for the collection of technical data on-site as well as the feasibility study of their offshore wind farm projects. In July 2010, HEC has completed its installation of a 550 kW solar thin-film photovoltaic system.
Reduce emissions from industrial and commercial processes (Item completed)	To mandate the use of ultra low sulphur diesel (ULSD) in industrial and commercial processes.	LegCo passed the Air Pollution Control (Fuel Restriction) (Amendment) Regulation, which came into effect in October 2008.
Enhance energy efficiency of buildings	To introduce mandatory implementation of the Building Energy Codes (BEC). (Item completed)	In early December 2009, the Government introduced a Bill for the mandatory implementation of BEC to LegCo. The Bill was passed in November 2010.
	To implement a comprehensive target-based green performance framework for government buildings	In April 2009, the Government issued an internal circular on the implementation of a comprehensive target-based environmental performance framework in Government buildings. Targets on various aspects of environmental performance have been set for new and existing government buildings.

Measure	Implementation Programme	Progress (Up to 30 November 2011)
	(Item completed)	We will continue to implement this target-based framework and promote energy saving in government buildings.
Mandatory Energy Efficiency Labelling Scheme	To launch the Mandatory Energy Efficiency Labelling Scheme. (Item completed)	In November 2009, the initial phase of the Mandatory Energy Efficiency Labelling Scheme, which covers three types of products including room air conditioners, refrigerating appliances and compact fluorescent lamps, came into operation. In September 2011, the second phase of the scheme was implemented in full, with its coverage extended to washing machines and dehumidifiers.
Encourage and facilitate adoption of cleaner production technologies and practices	A five-year programme to be launched to give professional and technical support to Hong Kong-owned factories in the Pearl River Delta (PRD) Region to adopt cleaner production technologies and practices.	In April 2008, working with the Guangdong Provincial Economic & Trade Commission (now the Economic & Information Commission of Guangdong Province) and major Hong Kong industry associations, the Government launched the Cleaner Production Partnership Programme to encourage and facilitate Hong Kong-owned factories in the PRD Region to adopt cleaner production technologies and practices. In August 2009, the Government and the Economic & Information Commission of Guangdong Province jointly launched the Hong Kong-Guangdong Cleaner Production Partners Recognition Scheme. The Scheme aims to recognize those Hong Kong-owned factories that have performed well in this area, and to encourage them to continue to pursue cleaner production.

Annex B

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

Measures	**Implementation Programme**	**Progress (Up to 30 November 2011)**
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. (Item completed)	The energy consumption per 10,000 Yuan GDP of Guangdong for 2010 was 0.664 tons of standard coal equivalent, down 4.3% as compared with that in 2009. 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) China National Offshore Oil Corp. 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 November 2011)
	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 7 million tonnes/year and finish construction of a number of natural gas power plants. (Item completed)	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. Phase II with total capacity expanded to 7 million tonnes per year was also completed by end 2009. 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. (Item completed)	The five AC and three 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.

Measures	**Implementation Programme**	**Progress (Up to 30 November 2011)**
Control 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). (Item completed)	The measure was 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.
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 300 MW 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 1,600 MW closed down in 2007, 3,600 MW in 2008 and 1,900 MW in 2009.] During the 11th Five-year Plan period, small thermal power generating units with a total capacity of 12,090 MW were closed down in Guangdong.
	To install FGD systems at the power plants in Shajiao, Huangpu, Taishan and Zhuhai by 2005. (Item completed)	In 2008, generating units installed with FGD systems increased by a capacity of 3,800 MW, amounting to a total capacity of 27,800 MW. Large scale thermal power generating units in Guangdong have all been equipped with FGD.
	To require all oil-fired and coal-fired generating units of capacity above 125MW to be equipped with FGD systems by 2007. (Item completed)	

Measures	Implementation Programme	Progress (Up to 30 November 2011)
	To require all coal-fired and oil-fired power plants to adopt low nitrogen oxides (low-NOx) combustion technologies in case of alteration or expansion. (Item completed)	Low-NOx combustion technologies have already been required at all units in case of alteration or expansion.
	To require all coal-fired and oil-fired power plants under construction, alteration or expansion to install FGD systems.	Being implemented.
	To promote the installation of low-NOx combustion device at existing coal-fired and oil-fired power plants.	Being implemented. Guangdong Province promulgated the "Implementation Plan for Installing Low-NOx and Denitrification Systems at Thermal Power Plants in Guangdong" in January 2011, requiring all coal-fired generating units with a capacity below 125 MW to install with low-NOx burners.
	To study the feasibility of installing flue gas denitrification systems for existing power plants.	Development and Reform Commission of Guangdong Province has issued the relevant policy document and notification on the need for existing power plants to install denitrification systems. Guangdong Province promulgated the "Implementation Plan for Installing Low-NOx and Denitrification Systems at Thermal Power Plants in Guangdong" in January 2011, requiring all large scale coal-fired generating units with a capacity of 125 MW and above in the PRD Region to install low-NOx and denitrification systems by end 2013. Coal-fired generating units in other areas of the Guangdong Province are required to meet the same requirement by end 2014.

Measures	Implementation Programme	Progress (Up to 30 November 2011)
	To require all power plants under construction, alteration or expansion to install FGD equipment, particulate removal devices and automatic continuous emissions monitoring system. (Item completed)	The measure was implemented. The existing coal-fired generating units of capacity above 125MW had put in place continuous emissions monitoring system (CEMS) by end 2008, with a view to allowing the relevant authorities to have instant on-line access to the CEMS data.
	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. (Item completed)	The measure was implemented. New power plants in the region have adopted the new power plant emission standard.
	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. (Item completed)	From 1 July 2006, power plants with desulphurization system receive extra RMB 1.5 cents per unit when the electricity is sold to the power grid.
	To offer better sales terms (e.g. higher rates and grid connection priority) to power plants that are equipped with FGD and denitrification systems.	Extra RMB 1.5 cents per unit and grid connection priority have been offered to power plants with FGD systems. Better sales terms for power plants with denitrification systems are under preparation.
	To establish a province-wide quota administration system for total emissions of SO_2 and to study the emissions trading mechanism of SO_2.	Being implemented.

Measures	Implementation Programme	Progress (Up to 30 November 2011)
	To implement more stringent air pollutant emission standards for thermal power plants. (Item completed)	The new "Guangdong Emission Standards of Air Pollutants for Thermal Power Plants" has been implemented to further tighten the air pollutant emission standards since August 2009.
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. All industrial boilers are required to be installed with particulates removal devices. Restaurants located in sensitive areas and those having major impact on public livelihood must be installed with devices to purify cooking fumes.
	To phase out all coal-fired boilers with a capacity of less than 4 tonnes/hour, as well as coal-fired boilers which are less than 10 tonnes/hour in capacity and in use for more than eight years. (Item completed)	As at 31 October 2010, a total of 8,039 industrial boilers in the region have been phased out or retrofitted.
	To tighten emission standards for local boilers by 2010, so as to reduce emissions from industrial boilers and other boilers (e.g. commercial boilers). (Item completed)	The Guangdong "Emission Standard of Air Pollutants for Boilers" was released and came into force on 1 November 2010.
	To continue phasing out various production technologies and installations that have caused serious pollution by emitting SO_2, smoke and particulates.	To implement a mandatory system to phase out enterprises, various production technologies and installations that have caused serious pollution. In principle, new cement plants and extension of existing ones will not be planned in the PRD Region. Future development direction of cement plant will be on new dry-type projects with

Measures	Implementation Programme	Progress (Up to 30 November 2011)
		daily production capacity of more than 4,000 tonnes, and those 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. Certain cement production units located in Sanshui area in Foshan City were closed down by the end of 2007, and all vertical kiln cement production units were closed down by the end of 2008. Guangdong announced in January 2008 a plan to phase out all serious polluting cement plants in the province with a total production capacity of 38 million tonnes by 2010. Of these, a total production capacity of 28.53 million tonnes is located within the PRD Economic Zone. During the 11th Five-year Plan period, Guangdong had phased out cement plants with a total production capacity of 60 million tonnes. Guangdong announced in October 2007 a plan to phase out highly polluting iron and steel plants (a total production capacity of 16 million tonnes) by end 2010. During the 11th Five-year Plan period, Guangdong had phased out iron and steel plants with a total production capacity of more than 12.747 million tonnes.

Measures	Implementation Programme	Progress (Up to 30 November 2011)
	To actively study the technologies for controlling emission of NOx from stationary sources such as power plant boilers, industrial boilers and restaurant boiling water furnaces.	Emission of NOx 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.
	To require all cement, ceramic and sheet glass manufacturing enterprises in the PRD region to install highly effective dust extractors and desulphurization systems. (Item completed)	All cement, ceramic and sheet glass manufacturing enterprises in the PRD region had been equipped with highly effective dust extractors and desulphurization systems by 30 September 2010.
	To draw up the Guangdong "Emission Standard of Air Pollutants for Cement Industry". (Item completed)	The Guangdong "Emission Standard of Air Pollutants for Cement Industry" came into force on 1 November 2010.
	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.

Measures	Implementation Programme	Progress (Up to 30 November 2011)
Reduce the emission of VOC	To replace by 2003 paints using VOCs with xylene as the main solvent. (Item completed)	Completed. 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.
	To draw up VOC emission standards for furniture manufacturing, printing, surface coating (automobile manufacturing) and shoe-making industries. (Item completed)	The four standards came into force on 1 November 2010.
	To set up a registration and reporting system on the usage and emission control of organic solvents at major enterprises.	Since 31 May 2011, a preliminary registration and reporting system on the usage and emission control of organic solvents at major enterprises has been set up.
	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. (Item completed)	Guangdong announced in March 2008 a plan to complete vapour recovery work at oil depots, tanker trucks and petrol filling stations in the major PRD cities by end 2010. Since 2009, the work plan for installing vapour recovery systems at petrol filling stations, oil depots and tanker trucks was implemented in phases. The installation work in PRD region was completed on 31 October 2010, covering 2,097 petrol filling stations, 57 oil depots and 809 tanker trucks in total.

Measures	**Implementation Programme**	**Progress (Up to 30 November 2011)**
Reduce tailpipe emissions from motor vehicles	To commence the construction of a regional speed 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. The construction of the Guangzhou-Zhuhai Intercity Railway was started in December 2005, and its operation started in January 2011
	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 ahead of schedule for newly purchased public transport vehicles as well as replacements. In 2007, the number of replacements amounted to 1,874, making a total of 8,702 public transport vehicles complying with the National III emission standard in the city. (Item completed) - Selected in January 2009 as one of the first pilot cities to demonstrate and promote energy-saving vehicles and vehicles powered by new energy. Subsidies are provided to public service organizations to encourage purchase and use of energy-saving vehicles and vehicles powered by new energy - A total of 50 new generation hybrid public transport vehicles were put in use in Shenzhen at the end of 2008. (Item completed)

Measures	Implementation Programme	Progress (Up to 30 November 2011)
		Guangzhou - Active promotion of LPG public transport vehicles. There were over 6,700 LPG-driven public buses in Guangzhou, accounting for 80% of all public buses in the city (as at the end of 2007). The 16,700 taxis in the city have largely been converted into LPG taxis. [Item completed] - 28 LPG refilling stations had been built. (Item completed) - New generation hybrid public transport vehicles started to run in Guangzhou in January 2008. Huizhou - From 1 August 2007, all new public transport vehicles are required to comply with the National III emission standard.
	To embark upon the Global Environment Facility (GEF) Guangdong Green Freight Demonstration Project	Transportation companies are eligible for government rebates for procuring and installing energy saving facilities on their trucks, including tyres, aerodynamics and driving diagnostic systems. Performance-based awards will also be granted to those companies which suitably operate the installed facilities and provide required monitoring and evaluation reports.
	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 was implemented in 1 July 2005. A recommended catalogue of motor vehicles complying with the National III emission standard was introduced on 1 July 2006 to encourage and support the sale, import, purchase and use of motor vehicles on the catalogue.

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		Starting from 1 July 2008, all newly registered motor vehicles in PRD Region have to comply with National III emission standard. Starting from 1 July 2009, all newly registered motor vehicles in Guangdong Province have to comply with National III emission standard. Furthermore, starting from 1 September 2010, new light duty petrol vehicles and gas vehicles in PRD region are required to comply with National IV emission standards. <u>Guangzhou</u> - The requirement for all newly registered vehicles to comply with the National III emission standard was advanced to 1 September 2006. - The "blacklist" of 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.
	To introduce subsidy policy for replacement of "yellow-label vehicles" (i.e. petrol vehicles with pre-National emission standard or below and diesel vehicles with National II emission standard or below).	The subsidy policy was rolled out in September 2009 to tie in with the national policy of subsidizing "replacement of old vehicles with new vehicles". The policy offers subsidy to owners ranging from RMB 3,000 to 6,000 for vehicle replacement. In 2010, a total of 81,700 "yellow-label vehicles" were phased out.

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	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 being progressively implemented and improved. Non-compliance motor vehicles are prohibited from using the roads. "Regulation on the Prevention and Control of Pollution from Motor Vehicles in Guangdong" was promulgated on 2 June 2010. (Item completed) Since 1 December 2007, the pollutant emissions inspection and mandatory maintenance system for motor vehicles has been implemented in Shenzhen. Since 1 November 2009, Guangzhou, Shenzhen, Foshan, Zhuhai, Dongguan and Huizhou have also adopted the vehicular exhaust emission measurement method under simple driving mode conditions (機動車排氣污染簡易工況法檢測).
	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.	The environmental labelling system on in-use vehicles has been implemented in Guangdong since March 2009. A total of 4.898 million labels were issued in the PRD Region as at 31 October 2010. (Item completed) Since November 2010, the PRD region has implemented the "Regulation of the National-wide Vehicle Inspection and Environmental Labeling System for Motor Vehicles", with a view to implementing the "yellow-label" and "green-label" schemes for vehicles running in the region. The regulation also applies to cross-boundary vehicles from Hong Kong. Some PRD cities are progressively phasing in road use restriction measures for "yellow-label" vehicles.

Measures	Implementation Programme	Progress (Up to 30 November 2011)
		Shenzhen - An environmental labeling system for motor vehicles has been introduced. - Road use restriction measures for "non-green-label vehicles" have been further enhanced since 1 July 2009. The restriction zones for "yellow-label vehicles" are being gradually expanded. Shenzhen aims to restrict "yellow-label vehicles" from using main roads in city by 2011. - The vehicle inspection and environmental labeling management system established by the Ministry of Environmental Protection has been implemented since August 2010. (Item completed) Guangzhou - Starting from 1 January 2008, motor vehicles are granted environmental labels in accordance with performance. - The national-wide vehicle inspection and environmental labeling system for motor vehicles was introduced in November 2010. (Item completed)
	To vigorously promote the sale of motor vehicle fuel complying with the National III standard in the province. (Item completed)	Guangdong Province 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

Measures	Implementation Programme	Progress (Up to 30 November 2011)
		now capable of producing motor fuel complying with the National III standard. All petrol filling stations in Shenzhen and Guangzhou have been supplying National III standard motor fuels since April 2007 and May 2008 respectively. From July 2008, the supply network has been expanded to cover Zhongshan, Dongguan and Zhuhai. It has been further expanded to cover Huizhou in July 2009. As at 31 July 2010, Guangdong extended supply of National III standard motor fuels to the entire PRD region.
	To give consideration to advance introduction of the National IV standard motor fuel. (Item completed)	Preparation of fuel standard has been completed.
	To promote the sale of vehicle fuels complying with the National IV standards in the PRD region.	Guangzhou advanced the supply of National IV standard petrol on 1 August 2010. The supply has been extended to Shenzhen and Dongguan since 1 January 2011 and 1 August 2011 respectively.
	To study ways to control the growth of motorcycles in key cities.	Motorcycles have been banned from entering the urban areas in Guangzhou and Dongguan since 1 January 2007 and 1 September 2007 respectively.