

# 立法會

## *Legislative Council*

LC Paper No. CB(1) 1989/06-07

Ref : CB1/PL/EA

### **Report of the Panel on Environmental Affairs for submission to the Legislative Council**

#### **Purpose**

This report gives an account of the work of the Panel on Environmental Affairs during the Legislative Council (LegCo) session 2006-07. It will be tabled at the meeting of the Council on 4 July 2007 in accordance with Rule 77(14) of the Rules of Procedure of the Council.

#### **The Panel**

2. The Panel was formed by a resolution passed by the Council on 8 July 1998 and as amended on 20 December 2000 for the purpose of monitoring and examining Government policies and issues of public concern relating to environmental and conservation matters. The terms of reference of the Panel are given in **Appendix I**.

3. The Panel comprises 11 members, with Hon Audrey EU and Hon Emily LAU elected as Chairman and Deputy Chairman respectively. The membership list of the Panel is in **Appendix II**.

#### **Major Work**

##### Air

4. The deteriorating air quality remained high on the agenda of the Panel. Outdoor air quality was affected by local and regional air pollution. Local air pollution could be chiefly divided into two sources viz. stationary and mobile. Apart from pursuing various emissions reduction or prevention measures, the Hong Kong Special Administrative Region Government (HKSARG) had been co-operating with the Guangdong Provincial Government (GPG) since 2002 to reduce, on a best endeavour basis, the emissions of four major air pollutants, namely sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), respirable suspended particulates (RSP) and volatile organic compounds by 40%, 20%, 55% and 55% respectively in the Pearl River Delta (PRD) Region by 2010, using 1997 as the base year.

### *Local air quality*

5. Given the severity of air pollution, the Panel agreed that there was an imminent need to review Hong Kong's Air Quality Objectives (AQOs) and to develop a long-term air quality management strategy. In this connection, the Panel held a meeting in November 2006 to discuss the subject at which deputations were also invited to express their views.

6. AQOs were set under the Air Pollution Control Ordinance (Cap. 311) (APCO) to "promote the conservation and best use of air in the public interest". However, there was concern that the aim was too vague and all-embracing without specific reference to the protection of public health. Besides, the current set of AQOs comprising seven major air pollutants<sup>1</sup> was established in 1987 after making references to researches done mainly in the United States. Given the lapse of time, the present AQOs were outdated and fell behind other developed countries, particularly when recent scientific research findings suggested that particulate matters smaller than 2.5 microns (i.e. PM 2.5) had more direct health effects than those of larger sizes. Hence, there was a need for setting new health-based AQOs with reference to the World Health Organization Air Quality Guidelines. To this end, members welcomed the Administration's plan to conduct a comprehensive study for supporting the review of AQOs and developing a long-term air quality management strategy to achieve the new AQOs. However, they were concerned about the long lead time for implementation of the new AQOs which would take 18 months for review and another 18 months finalization before these could come into operation in 2009. Given the urgency to improve air quality, the Administration was requested to expedite the review as far as practicable to enable early introduction of the new AQOs, hopefully by late 2007 or early 2008.

7. The Panel noted that the Administration had introduced a series of measures to reduce air pollution from both stationary and mobile sources. The former was predominantly from power plants whereas the latter mainly referred to emissions from vehicles.

8. Power plants made up the largest emission source within Hong Kong, accounting for 92% of the total emission of SO<sub>2</sub>, and half of that of NO<sub>x</sub> and RSP. The situation was further aggravated with the increased use of coal by power plants in the last few years. The Panel therefore supported the Administration to impose emission caps on power plants in the renewal of the Specified Process Licence (SPL) under APCO and to link their permitted rate of return to their achievement of the emission caps. To meet the intended caps, the power companies would need to take additional measures, such as expediting the current works programme on emission reduction facilities, increasing the ratio of natural gas to coal in their fuel mix, reducing power supply to the Mainland and participating in emissions trading, etc.

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<sup>1</sup> The seven major air pollutants include sulphur dioxide, nitrogen dioxide, respirable suspended particulates, total suspended particulates, ozone, carbon monoxide and lead.

9. At the meeting in January 2007, the Panel received a briefing on the latest progress of emission reduction achieved by the power sector. These included the granting of Environmental Permits for the CLP Power Hong Kong Limited (CLP) for its flue gas desulphurization system and selective catalytic reduction retrofit projects in November 2006, the commissioning of the first gas-fired generation unit (L9) by the Hong Kong Electric Company in October 2006, as well as the exhibition of the Environmental Impact Assessment (EIA) reports for the proposed liquefied natural gas (LNG) receiving terminal and commercial scale wind turbine pilot demonstration at Hei Ling Chau by CLP for public inspection in December 2006. Questions were raised on the need for the LNG receiving terminal which was contingent upon the LNG reserves in Hainan, and the impartiality of the relevant EIA which was conducted by CLP rather than independent consultants. There was also concern that the installation of additional reception terminal would increase the capital investment of CLP, the cost of which would eventually be transferred to consumers. Consideration should be given to providing for common conveyance systems for LNG and other gas utilities in an attempt to minimize the environment impact associated with the construction of the facilities.

10. To reduce vehicular emissions, the Administration proposed to make it mandatory for long idling pre-Euro heavy diesel vehicles to be retrofitted with emission reduction devices. It also planned to introduce incentive schemes to encourage replacement of more polluting vehicles. These included the provision of tax concession to promote the use of environment friendly cars and a one-off grant to encourage early replacement of pre-Euro and Euro I diesel commercial vehicles with Euro IV vehicles. The Panel held a series of meetings to discuss these proposals and deputations were invited to express views on the latter.

11. Members were disappointed to note the Administration's decision to replace 36 existing vehicles with a model which was said to be low in fuel efficiency. Such a decision ran contrary to the proposal of providing incentives to encourage the use of environment friendly vehicles with low emissions and high fuel efficiency. They reiterated their repeated requests for the Administration to replace the government fleet with environment friendly vehicles. While supporting in principle the mandatory installation of emission reduction devices, there was concern about the efficacy of the devices which according to a local expert would decrease with time. Some members opined that it would be more effective to introduce an emission standard for retrofitted long idling pre-Euro heavy diesel vehicles, failing which the owners would be subject to cancellation of the vehicle licences.

12. On the provision of one-off grant to encourage owners of pre-Euro and Euro I diesel commercial vehicles to replace their vehicles with Euro IV vehicles, some members queried whether the provision of incentives to subsidize vehicle owners, who were indeed the polluters, to replace their vehicles ran contrary to the polluter-pays principle. They pointed out that the replacement scheme could not be completed without the provision of disincentives, such as higher licence fees, road restrictions or a ban on pre-Euro and Euro I vehicles, to deter the continued use of polluting vehicles. There was also concern that car dealers might tend to maximize their profits by increasing the vehicle prices in line with the one-off grant. To

ascertain the effectiveness of the one-off grant, a mid-term review should be conducted. Apart from the replacement of polluting vehicles, other measures such as increasing penalty for smoky vehicles, tightening emission control and stepping up of vehicle maintenance, could be introduced to tackle the problem of air pollution.

13. As emissions from idling vehicles with running engines (idling vehicles) would directly affect roadside air quality and have adverse impact on public health, members considered that the Administration should go ahead with the banning of idling vehicles without the need for further consultation, adding that similar consultation exercise conducted in 2001 had yielded no consensus. However, there were divergent views on the manner in which the ban should be implemented. Some members held the view a limited ban should be introduced in selected areas, such as schools, hospitals and government buildings, to minimize the impact on the trades, particularly tourist bus drivers who would have difficulties to turn off their engines while waiting as tourists might not be accustomed to the hot weather in Hong Kong. Others however stressed that public health should take precedence over that of the trades which should abide by the ban.

### ***Regional air quality***

14. To achieve the 2010 emission reduction targets, HKSARG and GPG had been pursuing various enhanced control measures under the PRD Regional Air Quality Management Plan. One of these measures was the Emissions Trading Pilot Scheme for Thermal Power Plants in the PRD Region. It was hoped that through the setting up of this platform, thermal plants from both sides would participate on a voluntary basis in emissions trading. By making use of market forces and the flexibility of emissions trading, power plants could be more proactive in pursuing different cost-effective emission reduction projects such that air pollutant emissions in the whole PRD Region could be reduced. An Emissions Trading Management Panel would be set up to assist the environmental protection authorities of both sides in the management of emissions trading matters under the pilot scheme, including management of the transfer and write-off of emission credits, announcement of the distribution of emission credits, proposed operational rules of emissions trading as well as training of personnel.

15. The Panel held two meetings in February and March 2007 to discuss the pilot scheme. Deputations were invited to express their views at the latter meeting. While there was no objection against the pilot scheme, concerns were raised on the lack of implementation details, including the emission caps for individual power plants, liability of the buyer should the seller failed to deliver the contracted emission credits etc. Apart from thermal power plants, the coverage of the pilot scheme should be extended to other industries. Consideration should also be given to including carbon dioxide (CO<sub>2</sub>) in the pilot scheme. In view of the more relaxed emission caps set by GPG, power plants in Guangdong could meet the caps easier and sell their emission credits to those in Hong Kong, thereby profiteering through emissions trading. The voluntary nature of the pilot scheme provided no incentives to power companies as they would unlikely be willing to buy emission credits out their own volition. Members also questioned the efficacy of the pilot scheme which

was only targeted at power plants. It was pointed out that the use of back-up generators running on diesel by industries and the burning of municipal waste in open air in many areas in Guangdong were more polluting than power plants. They also held that view that power plants should endeavour to meet the emission requirements rather than buying emission credits from their counterparts. A more effective way to reduce emissions was to set emission caps for all power plants in the PRD Region and require them to submit regular five-year emission reduction plans.

### Greenhouse gas emissions and their effects on global warming

16. Greenhouse gas<sup>2</sup> (GHG) emissions had been rising rapidly because of human activities. For instance, CO<sub>2</sub> is emitted from burning of fossil fuels and deforestation, methane and nitrous oxide from agricultural activities and halocarbons from refrigeration. In the atmosphere, these gases allow short-wave radiation from the sun to pass through to the earth's surface but hinder the infra-red radiation from escaping into the space, thus causing earth's surface to warm up and giving rise to global warming. Associated with global warming are other changes in the climate system, including changes in the frequency and intensity of extreme weather and climate events, such as heat waves, cold spells, heavy rain, droughts and tropical cyclones as well as a rise in the sea level. These changes had profound impacts on natural and human systems and were often adverse in nature.

17. To ascertain GHG emissions in Hong Kong and the measures being taken to reduce GHG, the Panel held a meeting in May 2007 at which deputations were invited to express their views. Members noted that GHG emissions per capita and per kilowatt hour were relatively low in Hong Kong. This might be attributed to factors such as the relocation of industries to the Mainland, efficient public transport system and increased use of natural gas for power generation etc. Notwithstanding, GHG emissions in Hong Kong were still rising and there was a need for Hong Kong to discharge its responsibility as a global citizen to keep GHG emissions to a minimum. These included setting local GHG emissions target, optimizing the use of renewable energy (RE), promoting energy conservation and efficiency such as phasing out of low energy-efficient tungsten lamps and introducing legislation on lighting, imposing electricity levy and surcharge, reducing the use of paper to protect forests and implementing large scale tree-planting programmes etc.

### Energy conservation

18. The Panel received a briefing on the various energy conservation initiatives taken by the Administration pursuant to the motion passed by the Legislative Council on the subject in December 2005. Members noted with concern that Hong Kong's energy consumption per capita was higher than that of United Kingdom and Italy. They considered that there was an urgent need for the Government to adopt more effective energy conservation measures. These included the application of RE

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<sup>2</sup> Greenhouse gas include carbon dioxide, methane, nitrous oxide, water vapour, ozone and several other trace gases such as halocarbons

starting with schools/universities. A mechanism should be worked out to allow grid connection so that any surplus electricity generated from RE could be sold to the power companies. This would encourage enterprises to set up their own RE systems. On energy efficiency, members welcomed the introduction of the Energy Efficiency (Labelling of Products) Bill which was expected to help achieve energy savings of about \$135 million per year. While acknowledging that all works departments were required to apply energy-efficient features in new Government buildings and retrofitting projects to ensure compliance with the Building Energy Codes issued by the Electrical and Mechanical Services Department, members held the view that these measures should not be confined to Government buildings but should apply to all other buildings. Consideration should be given to providing incentives for the adoption of energy efficiency measures in commercial buildings. Other measures, such as the provision of green rooftops and vertical greening, application of demand side management on power generation, installation of automatic lighting on/off control systems in public housing estates should also be considered.

### Waste management

#### ***Construction Waste Disposal Charging Scheme***

19. The Waste Disposal (Amendment) Ordinance 2004, which aimed to provide the statutory basis for the making of regulations for introducing a charging scheme for the disposal of construction waste at landfills, sorting facilities and public fill facilities, was passed in July 2004. Meanwhile, the two related regulations, namely the Waste Disposal Facility (Amendment) Regulation 2004 and the Waste Disposal (Charges for Disposal of Construction Waste) Regulation which set out details of the charging scheme were passed by the Legislative Council in January 2005 and implemented in December 2005.

20. The Panel noted that since the implementation of the charging scheme, the average quantity of construction waste disposed of at the three landfills was reduced from 6 600 tonnes per day (tpd) to 4 000 tpd, representing a reduction of almost 40%. While acknowledging the effectiveness of the scheme in reducing and recycling construction waste, members were concerned about the increase in number of compliant cases on fly-tipping activities. They pointed out that some government land in rural areas had become the dumping sites for waste whereas private landowners whose land had suffered from fly-tipping had to pay for the removal of the waste. In order to effectively monitor the disposal of construction waste, consideration should be given to working out an estimate on the amount of waste to be generated from each project such that this could be checked against the actual waste delivered to landfills. For construction waste arising from renovation of domestic premises, efforts should be made to liaise with owners' corporations/management committees of residential developments to monitor the disposal of such waste. In old districts where there were no owners' corporations/management committees, consideration might be given to seeking assistance from the District Councils. As regards enforcement, members generally welcomed the pilot construction waste fly-tipping spotter scheme to be launched by the Administration, but stressed that the reporting procedures for fly-tipping under the pilot scheme should not be complicated lest these might discourage spotters from reporting such activities.

### ***Management of municipal solid waste***

21. In December 2005, the Administration published "A Policy Framework for the Management of Municipal Solid Waste (2005-2014)". The Policy Framework set out a comprehensive strategy consisting of a series of tried and proven policy tools and measures to tackle the waste problem ahead and to achieve the targets of waste avoidance (to reduce the amount of municipal solid waste (MSW) generated in Hong Kong by 1% per annum up to the year 2014), reuse, recycling and recovery (to increase the overall recovery rate of MSW to 45% by 2009 and 50% by 2014) as well as bulk reduction and disposal of unavoidable waste (to reduce the total MSW disposed of in landfills to less than 25% by 2014). The emphasis of the way forward on MSW management for the next decade from 2005 to 2014 was on community participation and the "polluter-pays" principle. The major initiatives proposed in the Policy Framework included, among other things, the introduction of mandatory producer responsibility schemes (PRs) through new legislation upon completion of detailed studies on product-specific measures, continual development of the EcoPark exclusively for the environmental industry, adoption of a green procurement policy by the Government as far as practicable, and introduction of landfill disposal bans to complement PRs. In March 2007, the Panel received a briefing on the progress of the key initiatives in the Policy Framework.

22. On waste avoidance and minimization, members noted with concern that the strong economic growth in 2006 had resulted in about 4% increase in commercial and industrial waste (CIW) generation. Of the 9 000 tpd of MSW to be disposed of, over 2 000 tpd were CIW. The increase in CIW was mainly due to the increase in organic waste from restaurants and food factories, which being "wet" waste would be dumped in landfills. Members therefore supported in principle the Administration's plan to set up facilities in the Kowloon Bay Waste Recycling Centre to treat organic waste. The proposed facilities would be able to treat about four tpd organic waste. More such facilities would be provided in future for the treatment of organic waste using different technologies. Another cause of concern of the Panel was over-packaging of products, particularly when the packaging had no reusable value and would end up as domestic waste. Given that packaging was one of the six items to be included under PRs, members opined that consideration should be given to expediting the planned feasibility study on PRS on packaging.

23. On reuse, recovery and recycling, members were disappointed that MSW recovered for local recycling had reduced from 0.16 million tonnes in 2005 to 0.11 million tonnes in 2006. Owing to the high operating cost in Hong Kong, recyclables were mostly exported to the Mainland and other places. The situation was further aggravated following the closure of the two local waste paper recycling operations. To promote local recycling, members urged the Administration to expedite the development of EcoPark to provide long-term land at affordable cost for recycling industries so that more recovered materials could be recycled locally to create a circular economy.

24. On bulk reduction and disposal of unavoidable waste, some members pointed out that with the advancement in waste technologies, the land requirement for treatment of wet waste had been reduced. Therefore, instead of relying on thermal technologies for waste treatment as recommended by the Administration, consideration should be given to separating all MSW at source to be followed by mechanical and biological treatment before incineration.

25. As the Source Separation of Domestic Waste Programme had revealed that waste separation could not be carried out in housing developments which did not have sufficient space for the installation of waste separation facilities, members opined that consideration should be given to making it mandatory for the provision of space in the design of new buildings for waste separation facilities, in line with overseas practices. They also supported the early implementation of MSW Charging Scheme to help reduce and recover waste.

### ***A proposal on an environmental levy on plastic shopping bags***

26. In May 2007, the Panel received a briefing on the proposal to introduce a PRS on plastic shopping bags under which retailers covered by the scheme would no longer be allowed to give out free plastic shopping bags. Their customers must pay an environmental levy of 50 cents for each plastic shopping bag they asked for. It was expected that with the introduction of the environmental levy, the number of plastic shopping bags distributed by the relevant retailers would be reduced by 50%. The reduction in plastic shopping bags would represent a saving of raw materials as well as the energy and transport costs involved in their production.

27. While supporting the proposal in principle as this would deter the indiscriminate use of plastic shopping bags, members noted that there were divergent views in the community. For instance, some plastic bag manufacturers had expressed concerns about the impact of the proposal on their business. To gauge public views on the proposal, deputations had been invited to attend the Panel meeting in July 2007.

### ***Green measures in the Government***

28. The Panel noted that since 2000, the Government had developed and adopted the practice of green procurement, in terms of reducing its consumption of resources, facilitating the collection of recyclables, including additional green requirements to product specifications and, where economically rational, expanding the range of green products to be purchased. In the public works arena, marks were awarded in the tender assessment for proposals that adopted environment-friendly construction methods and materials in public works contracts. Contractors were also required to minimize the generation of construction and demolition materials and maximize their reuse. To improve energy efficiency, all newly designed government buildings and retrofit projects should be in full compliance with the Building Energy Codes. Energy saving and RE projects had been implemented to reduce electricity consumption in these buildings.

29. Members however were disappointed that green products only comprised 1% of the total purchase value of Government's procurement. They considered it necessary that more proactive actions should be taken by the Administration in encouraging green procurement, including the appointment of an independent green audit. Efforts should also be made to promote environmental practices by apprising the public the availability of green products to facilitate their purchase. In the public works arena, consideration should be given to extending the Building Energy Codes to all existing buildings. Given that the adoption of green rooftops had proven success in conserving energy, some members opined that the Administration should consider setting a certain percentage of space at the rooftop of government buildings as green rooftops. It should also take the lead in mandating the installation of green measures, such as photovoltaic systems, and energy saving measures in new government buildings.

### Sewage

30. The commissioning of the Harbour Area Treatment Scheme (HATS) Stage 1 at the end of 2001 had brought improvement to the water quality of most parts of the Victoria Harbour. Pursuant to the recommendation of the International Review Panel, the Chief Executive in Council endorsed the proposal to centralize all treatment facilities on Stonecutters Island and a two-phased implementation strategy for HATS Stage 2. HATS Stage 2A would entail the construction of a tunnel conveyance system to transfer the currently untreated sewage from the northern and western shores of Hong Kong Island to Stonecutters Island, expansion of the chemical treatment and other facilities at the existing Stonecutters Island Sewage Treatment Works (SCISTW) to cope with the sewage from Hong Kong Island and with projected future increases in sewage flows and provision of disinfection facilities. HATS Stage 2B would involve the construction of a biological treatment facility at a site adjacent to SCISTW. As biological treatment required a substantial investment as well as the allocation of further land, the phased approach would allow the step-by-step upgrading of the existing sewage treatment facilities so as to properly manage the uncertainties regarding future population growth and sewage flow build-up and the time required to finalize land and planning issues relating to Stage 2B.

31. In January 2007, the Panel held two meetings to discuss the progress of the HATS Stage 2A and the proposal for applying the polluter-pays principle in the provision of sewage services. Deputations were invited to attend the meeting on 22 January 2007 to express their views on these issues.

32. While welcoming the improvement to water quality made under HATS Stage 1, members considered that there would still be a need to proceed with HATS Stages 2A and 2B. From an environmental perspective, the best option was to proceed with Stages 2A and 2B in tandem. However, if this was not possible, the Government should have a clear commitment on when HATS Stage 2B should be implemented. There was also concern about the use of chlorination for disinfection under HATS Stage 2A given the adverse impact on the marine environment.

33. The Panel noted the Administration's proposals to strengthen the application of polluter-pays principle in the provision of sewage services and to increase the Sewage Charge (SC) gradually so as to raise the cost recovery rate from the present 54% to 80% in 10 years' time and to set out the fee levels in the coming 10-year period in a single item of legislation. There were divergent views on the proposals. Green groups generally supported the polluter-pays principle and would not object to the proposed SC increases to be spread over a period of 10 years, given that HATS was a large-scale and time-consuming project which required a long-term financial arrangement. The trades however pointed out that the proposed increases would further aggravate the already difficult business environment. As the restaurant trades were not able to transfer the rising operating cost to consumers due to keen competition, many of them had ceased operation.

34. Query was also raised on the propriety of setting fee increments for the next 10 years. Members were concerned that this would set a precedent for other policy bureaux which might submit similar proposals under the pretext of ensuring financial stability in taking forward policy initiatives. The proposed arrangement also lacked the needed flexibility to cope with changes, particularly when no review would be conducted during the interim. The Administration was urged to taken into account the views expressed by members and deputations in taking forward the legislation.

#### Others

35. The Panel was briefed on retrofitting of noise barriers on Tsing Tsuen Bridge at Tsing Yi Island and Tsuen Wan Approaches, Tseung Kwan O Road, Yuen Shin Road and Kwun Tong Bypass, refurbishment and modification of the Island East Transfer Station, Tai Po sewerage treatment works stage 5 phase 2A - disinfection, HATS Stage 2A - planning and design of the upgrading works of SCISTW and the preliminary treatment works as well as provision of sewerage facilities at Yung Shue Wan and Sok Kwu Wan on Lamma Island and Tseng Tau Chung Tsuen in Tuen Mun.

36. From October 2006 to June 2007, the Panel held a total of 13 meetings.

**Legislative Council  
Panel on Environmental Affairs**

**Terms of Reference**

1. To monitor and examine Government policies and issues of public concern relating to environmental and conservation matters.
2. To provide a forum for the exchange and dissemination of views on the above policy matters.
3. To receive briefings and to formulate views on any major legislative or financial proposals in respect of the above policy areas prior to their formal introduction to the Council or Finance Committee.
4. To monitor and examine, to the extent it considers necessary, the above policy matters referred to it by a member of the Panel or by the House Committee.
5. To make reports to the Council or to the House Committee as required by the Rules of Procedure.

**Legislative Council  
Panel on Environmental Affairs**

**Membership list for 2006-2007 session**

<b>Chairman</b>	Hon Audrey EU Yuet-mee, SC, JP
<b>Deputy Chairman</b>	Hon Emily LAU Wai-hing, JP
<b>Members</b>	Hon Martin LEE Chu-ming, SC, JP Hon SIN Chung-kai, JP Hon WONG Yung-kan, JP Hon LAU Kong-wah, JP Hon Miriam LAU Kin-yee, GBS, JP Hon CHOY So-yuk, JP Hon LEE Wing-tat Hon Jeffrey LAM Kin-fung, SBS, JP Hon TAM Heung-man
	(Total : 11 Members)
<b>Clerk</b>	Miss Becky YU
<b>Legal Adviser</b>	Miss Monna LAI
<b>Date</b>	12 October 2006