

For discussion on
28 January 2013

**Legislative Council
Panel on Environmental Affairs**

**2013 Policy Address
Policy Initiatives of Environment Bureau:
Environmental Protection**

PURPOSE

This paper sets out the policy initiatives of the Environment Bureau (ENB) and the Environmental Protection Department (EPD) as regards environmental protection in the 2013 Policy Address.

KEY FOCI

2. The key foci of ENB and EPD are in five policy areas, namely air quality, waste management, nature conservation, low carbon living and green community. Our vision, new initiatives and on-going initiatives in respect of these five policy areas are outlined in the following sections.

OUR VISION

Air Quality

3. The primary objective of our air quality management policy is protection of public health. Our near term target is to achieve broadly by 2020 the proposed new Air Quality Objectives (AQOs) through introducing new air quality improvement measures. We will review the AQOs no less than once every five years with a view to tightening the standards where appropriate, and we will use the air quality guidelines (AQG) of the World Health Organization as our constant reference. As a long-term goal, we will strive to attain the ultimate target to achieve AQG.

Waste Management

4. Hong Kong's per capita quantity of waste generated on a daily basis is higher than that of many developed economies. Our landfills will also be exhausted one by one by 2020. Hong Kong has a waste crisis that can only be met by taking multiple, concurrent actions ranging from waste reduction at

source, enhancing reuse, increasing recycling, building a comprehensive and modern waste treatment infrastructure that can handle different types of waste, to disposal of waste. Our general approach is “reduction first” and to regard waste as “resources” that can and should be put to use. Our strategy is to mobilize the community to help reduce waste, as everyone must participate if Hong Kong is to be successful in waste reduction. Beyond mobilization, it is the Government's responsibility to facilitate a change of behaviour so that Hong Kong can reuse and recycle waste to a much higher level. It is also our responsibility to put a comprehensive waste management system in place. To this end, we need to introduce advanced technologies to recover energy from municipal solid waste (MSW) and reduce its volume before disposal. We will need adequate landfill capacities as final repositories for non-recyclable and residual waste.

Nature Conservation

5. Hong Kong is rich in biodiversity, and we have beautiful natural scenery. While we have longstanding practices to regulate, protect and manage our natural resources, we must admit that there are growing conflicts between development and conservation. As Hong Kong has adopted the United Nations Convention on Biological Diversity, our general approach is to use the Biodiversity Strategy and Action Plan to be developed under the Convention to stimulate community discussion on the conservation of biological diversity, sustainable use of ecological resources and sharing of benefits. We recognize this will take time and effort but we believe dialogue is the way ahead to help resolve conflicts between development and conservation.

Low Carbon Living

6. Beyond pollution reduction, we will also reduce carbon emissions to combat climate change from both the demand and supply side of energy. On the demand side, we will promote energy efficiency more aggressively, while on the supply side, we will consider the best future fuel mix for Hong Kong.

Green Community

7. Our vision is to build a livable, healthy and green city, where residents can directly participate in green mobilization. Hong Kong will succeed when our people take action. We have already started to engage the public much more actively, and we commit to continuing engagement with stakeholders and the public on all major policies and initiatives.

NEW INITIATIVES

Air Quality

8. To improve air quality with a public health focus, our aim is to reduce the exposure that has the greatest health impacts. These also happen to be the air pollution generated locally. Our foci are on improving roadside air quality and reducing marine emissions. Beyond these, we must also collaborate with the Guangdong Provincial Government to improve regional air quality, which has a major impact on the whole Hong Kong-Pearl River Delta (PRD) airshed. We will release a new clean air plan in the first quarter of 2013 to provide a fuller picture of our policy approach and evolving measures.

Reducing Roadside Pollution

9. Tackling roadside air pollution is our first priority because this is where daily exposure is the greatest. We will address emissions from diesel commercial vehicles, franchised buses and liquefied petroleum gas (LPG) taxis and public light buses aggressively because they are the major pollution sources.

10. At present, there are some 128,000 diesel commercial vehicles in Hong Kong (excluding franchised buses). About 88,000 of them are pre-Euro IV diesel commercial vehicles (i.e. pre Euro, Euro I, II and III) which emit about 88% of respirable suspended particulates (RSP) and 46% of nitrogen oxides (NOx) from all vehicles in 2010. If all these pre-Euro IV diesel commercial vehicles are replaced by Euro V models, the vehicular emissions of RSP and NOx will be reduced by 80% and 30% respectively.

“Carrot and stick” approach to phase out heavily polluting diesel commercial vehicles

11. To phase out the heavily polluting diesel commercial vehicles, we will adopt both incentives and regulatory measures. Specifically, we propose to -

- (a) offer an ex-gratia payment up to 30% of the taxable values of new vehicles to vehicle owners for phasing out their pre-Euro IV diesel commercial vehicles. Details of the proposed payment level are at Annex I. Unlike previous incentive schemes, ex-gratia payment

will also be provided to vehicle owners who scrap their pre-Euro IV diesel commercial vehicles without replacement by new vehicles. The payment level will be correlated inversely with the age of the vehicle to be scrapped. This will give extra impetus for vehicle owners to take action earlier;

- (b) stop the renewal of licences for pre-Euro IV diesel commercial vehicles with effect from specified dates. The proposed ban will be implemented in phases, with the banning of the most polluting pre-Euro and Euro I vehicles on 1 January 2016, and Euro II on 1 January 2017 and Euro III on 1 January 2019 respectively; and
- (c) set a statutory retirement age of 15 years for newly registered diesel commercial vehicles. This will provide a long term solution to the pollution problem caused by aged diesel commercial vehicles through a continued upgrading in the emission standard of the commercial vehicle fleet.

12. To take forward the proposed “carrot and stick” approach, the Government has earmarked \$10 billion for the proposed ex-gratia payment to facilitate the implementation of the proposal to ban licence renewal of heavily polluting diesel commercial vehicles with effect from specified dates, details of which are summarized in Annex I. We will consult this Panel, the relevant transport trades and other stakeholders on the proposals. Subject to the approval of the legislative proposal for effecting the proposed ban on licence renewal, we would seek funding approval from the Finance Committee (FC) for the ex-gratia payment.

Franchised Buses

13. To reduce emissions of the existing franchised bus fleet, we undertake a trial on retrofitting Euro II and Euro III buses with selective catalytic reduction devices to reduce their NOx emissions. We have just completed the trial and will report on the trial findings to this Panel separately.

14. We are also supporting the franchised bus companies to try out the most environmentally friendly buses. The franchised bus companies, with funding support from the Government, have already placed orders for the procurement of six hybrid buses and are making preparations to procure 36 electric buses. The trials will commence in 2014.

15. The Transport Department has been pursuing bus service rationalization to enhance operational efficiency of buses and reduce traffic congestion and roadside emissions. In coming years, several new railway lines will be commissioned and they open opportunities for larger-scale bus service re-organization.

LPG taxis and public light buses

16. With funding approved by the Legislative Council (LegCo), we are now inviting tenders to help owners of LPG taxis and public light buses to replace their catalytic converters on an one-off basis for reducing emission. After the completion of the replacement programme, we will deploy remote sensing devices to identify those vehicles which emit excessively. The sensors will also be able to identify high emission petrol vehicles. Our aim is to start the deployment of remote sensing devices in 2014.

Reducing Emissions from Marine Vessels

17. Ocean-going vessels (OGVs) are our primary targets as they are powered by heavy fuel oil with an average sulphur content of 2.8%, i.e. 2,800 times of that of motor diesel. We launched a 3-year incentive scheme in September 2012 to reduce by half the port facilities and light dues of those OGVs that switch to cleaner fuels (with sulphur content not more than 0.5%) while at berth in Hong Kong waters. Up to 31 December 2012, we received 839 applications for the incentives, with a participation rate of about 12 %.

18. We are now making preparations to mandate the fuel switch for OGVs at berth in Hong Kong waters and plan to submit the relevant legislation to LegCo in the next legislative year after consulting the relevant maritime trade. To maximize the environmental benefits, we are also exploring with the Guangdong authorities on the feasibility of mandating OGVs to switch to cleaner fuel while at berth in PRD ports. In the longer term, we hope to establish an Emission Control Area in PRD waters together with the Guangdong authorities.

19. The Kai Tak Cruise Terminal, which will start operation in June this year, has reserved space for the installation of on-shore power facilities. Recently, an international standard for on-shore power has been promulgated. The Government will seek funding from the FC for the installation of on-shore power facilities at the new cruise terminal so that cruise vessels with appropriate connecting devices can further reduce its emission when berthing.

20. At present, we are studying jointly with the local marine sector the technical feasibility of reducing the sulphur content of local marine diesel from 0.5% to 0.05%. The study will be completed in the first quarter of 2013. Subject to satisfactory outcomes of the study, we would work out a legislative proposal later in the year.

Waste Management

Waste Management Blueprint

21. We are preparing a waste management blueprint, which we plan to publish in the first quarter of 2013. The blueprint will lay out our comprehensive approach to waste management premised on the “waste hierarchy” widely adopted internationally. It will contain a full range of initiatives on reduction, reuse, recycling, recovery, treatment and landfilling.

Food Wise Hong Kong Campaign

22. To take forward the Chief Executive’s pledge to promote food waste reduction, the Secretary for the Environment has set up and chaired a Food Wise Hong Kong Steering Committee. The steering committee comprises members drawn from relevant sectors of the community. The campaign will promote public awareness of food waste problems and co-ordinate efforts within the Government and public institutions to lead by example in food waste reduction. It also aims to instill behavioural change at the individual and household levels to help reduce food waste generation, draw up and promote good practices of food waste reduction at commercial and industrial establishments, and facilitate food donation to charitable organizations by establishments with surplus food.

Support to the Recycling Trade

23. Every year, over 3 million tonnes of recyclable materials are recovered and the majority are exported for recycling. For waste paper, export is primarily via Public Cargo Working Areas (PCWA). To provide further support to the local recycling trade, the Government will consider allocating sufficient PCWA berth length for bidding by the recycling trade for their exclusive use, to ensure that local waste recyclers would have stable export facilities to support their waste recycling activities. The local recycling trade, PCWA operators and other relevant stakeholders will be consulted on the detailed arrangements.

MSW Charging

24. The public consultation in 2012 revealed that there is majority support to introduce MSW charging in Hong Kong to help us reduce waste. Upon the Government's invitation, the Council for Sustainable Development will engage stakeholders and members of the public on the implementation details of MSW charging.

Nature Conservation

Biodiversity Strategy and Action Plan (BSAP)

25. In accordance with the requirements of the Convention on Biological Diversity, we will formulate a BSAP based on principles of the Convention and taking into account local needs and priorities. The action plan will facilitate the implementation of the Convention, enhance nature conservation and help achieve sustainable development of our city. A public engagement exercise will be conducted from 2013 to 2014 to seek views from relevant stakeholders and the public on the issues to be addressed and the preparation of the BSAP before it is put into implementation in 2015, as is called for under the Convention.

Low Carbon Living

Promotion of Green Building

26. The Government has been striving to promote energy efficiency and energy saving to combat climate change. Green building is instrumental to low-carbon living as buildings account for over 60% of our greenhouse gas emissions. To promote green building in a holistic manner, an inter-departmental steering committee has been established under the chairmanship of the Secretary for the Environment. Working closely with various stakeholders, the steering committee will strengthen the co-ordination among various bureaux and departments to formulate implementation strategies and action plans for the promotion of green building in both public and private sectors in Hong Kong.

Promotion of Carbon Audits

27. To encourage private sector companies to embark on carbon reduction actions, the Government will set up a carbon footprint repository in

the form of a dedicated webpage for listed companies to disclose their carbon audit findings, and share useful practices. We believe the green success stories of these first movers will help inspire others to follow suit.

Fuel mix review

28. To reduce carbon emissions from electricity generation on the supply side, the Government proposed before to improve our fuel mix by substantially reducing the reliance on coal to less than 10% and increasing the share of natural gas and renewable energy to about 40% and 3-4% respectively in 2020, with the balance of about 50% to be met with imported nuclear energy from the Mainland. Following the Fukushima incident, various countries have been reviewing the safe use of nuclear power. We will further review our fuel mix, taking into account the development in the international arena and views of the local community, while striving to strike a balance among the four competing energy policy objectives of safety, reliability, affordability and environmental protection.

Green Community

29. Our vision is for environmental concepts and practices to become part of people's daily lives. To achieve this, we recognize that the government's role is to raise awareness, engage, facilitate and regulate where necessary so that the community becomes involved and adopt new attitudes and behaviour. We have already been hosting much larger scale expert, stakeholder and public engagements on key policy areas – air quality, energy, waste and conservation. We will continue to do so. In this year's Policy Address, we have the following new initiatives.

Environment and Conservation Fund (ECF)

30. We need resources to raise awareness and enable the public to participate in creating a green community. Since its establishment in 1994, ECF has successfully engaged people from different sectors to protect the environment and organized more than 3,900 environmental protection activities. The result is impressive. We propose to inject \$5 billion to the ECF as a capital-reserved endowment fund to generate investment income for taking forward work that helps raise awareness, research, engage and facilitate the creation of a green community. This substantial injection of funds is our long-term commitment to environmental protection and conservation and would enable continued support for community green actions by investment returns.

Community Green Stations

31. The Government plans to develop five pilot “community green stations” in different parts of the territory to provide accessible and visible support for green living at the community level. Each of these green stations will be operated by an NGO to be selected through open tender. Leveraging on the NGO operators’ local connections, the green stations will collaborate with schools, property management and other relevant stakeholders or institutions within their respective catchment on environmental education and coordination of recycling initiatives. In addition to holding publicity and educational programmes, the “community green stations” will support recycling efforts at community level, including reaching out to the community for the collection of recyclables, supporting the Community Recycling Network (CRN) and conducting other measures to promote the separation of waste at source.

32. In their design and construction, these green stations will be both sustainable and aesthetically pleasing. We believe both can be achieved with good design of the sites and appropriate management of them. Their presence should be seen positively within the neighbourhood where they are located and welcomed by residents. We have identified potential sites and will consult the District Councils concerned, with a view to commencing the construction programme as soon as the sites are available. We aim to commission the stations in phases from late 2013.

ON-GOING INITIATIVES

33. There are numerous on-going initiatives that will be taken forward and further developed by this Administration.

Air Quality

Joint Emission Reduction Plan with Guangdong

34. Collaboration with Guangdong is also a top priority for this Administration. In order to improve regional air quality, regional cooperation is essential. In November 2012, the Hong Kong and Guangdong authorities jointly endorsed a new air pollutant emission reduction plan which sets out the emission reduction targets/ranges for 2015 and 2020 for Hong Kong and PRD Economic Zone (PRDEZ) as shown in Annex II. Upon attainment of the new emission reduction ranges, we would be able to meet broadly the new AQOs by 2020.

Control of Power Sector Emissions

35. To keep the momentum of reducing air emissions from the power sector, the Government promulgated the third Technical Memoranda in November 2012 for implementation in 2017, under which the emission caps of various air pollutants from power plants have been tightened.

Environment-Friendly Vehicles

36. We have been encouraging the use of environment-friendly vehicles through the reduction in the First Registration Tax since April 2007. In order to ensure the tax incentives are given to vehicles with outstanding emission performance and fuel efficiency, we review the qualifying standards annually. As new vehicle models can generally achieve higher emission performance, taking account of overseas practice, we will, with effect from 1 April 2013, substantially tighten the qualifying standards for the tax incentives such that amongst those currently available in the market, 26 petrol private car models and 185 commercial vehicle models will remain to be eligible.

Promotion of Electric Vehicles (EVs)

37. The Government has been actively promoting the wider use of EVs through various means, including providing financial incentives by waiving the First Registration Tax of EVs, and working jointly with relevant sectors to put in place a comprehensive EV charging network and other ancillary facilities. We will continue to liaise with car manufacturers to encourage them to bring their EVs into Hong Kong. The Government will also continue to take the lead in using more EVs and encourage public and private organizations to do the same.

Pilot Green Transport Fund

38. We have been encouraging public transport operators and goods vehicle owners to test out green innovative transport technologies via the \$300 million Pilot Green Transport Fund established in March 2011. As at end 2012, we approved 37 applications with a total subsidy amounting to about \$87 million for the trial of five electric taxis, 19 electric buses, 12 electric goods vehicles, 24 hybrid goods vehicles and 12 hybrid light buses. We will share the findings of the trial with the transport trades with a view to encouraging them to adopt green vehicles in Hong Kong.

Waste Management

Producer Responsibility Schemes (PRSs)

39. We are preparing legislative proposals to extend the Environmental Levy Scheme on Plastic Shopping Bags and to introduce a new PRS scheme on waste electrical and electronic equipment. Looking ahead, we will continue to expedite the progressive implementation of mandatory PRSs, with priority accorded to glass beverage bottles. At the same time, we will continue to promote and support the various voluntary recycling programmes covering computers, fluorescent lamps and rechargeable batteries.

Community Promotion of Waste Reduction and Recycling

40. Complementing the Source Separation of Waste Programme launched in 2005 (under which over 80% of the population now have recycling bins close to where they live and work), we have extended recyclables collection points in local districts and stepped up joint efforts with all District Councils, green groups and community organizations to form the CRN. The coverage of the CRN will be expanded in 2013 to invite greater participation from owners' committees and property management companies of housing estates with support for implementation of education and promotion activities.

Landfill Extension

41. At present, we rely on three existing landfills to dispose of our waste and even with all the waste reduction and minimization initiatives implemented, it is estimated that they will be exhausted one by one by 2020. We have an urgent need to extend the three landfills to serve as the final repositories for non-recyclable and residual waste and have to act now as the associated tendering and construction works for landfill extension projects will take several years to complete. We are aware of public concerns on landfill extension projects and will endeavour to allay them through close communication with relevant parties including the District Councils, local community and other relevant stakeholders.

Organic Waste Treatment Facilities (OWTF)

42. We are planning to develop modern OWTFs in phases to recycle food waste into biogas for energy recovery and compost products. Upon

obtaining funding support from the LegCo, we plan to commission the first phase of OWTF at Siu Ho Wan of North Lantau with a daily capacity of 200 tonnes by 2016, and the second phase of OWTF at Sha Ling of the North District with a daily capacity of 300 tonnes by 2017 respectively.

Integrated Waste Management Facility (IWMF) Phase 1

43. Alongside the various waste reduction and recycling initiatives, Hong Kong still needs to build waste-to-energy MSW treatment facility. The plan for IWMF Phase 1 is going through a judicial review process. When that is completed, we will need to revisit this subject again.

Nature Conservation

Protection of Country Park Enclaves

44. We will continue to oversee the implementation of the measures to better protect country park enclaves. In 2013, we aim to complete the statutory procedures for incorporating Tai Long Sai Wan, Yuen Tun and Kam Shan Country Park enclaves into existing country parks. We would also assess the suitability of other country park enclaves against a set of established principles and criteria for incorporation into respective country parks.

Banning of Commercial Fishing in Marine Parks

45. In 2013, in consultation with stakeholders, we will take forward the proposal to ban commercial fishing in marine parks for improving ecosystems in marine parks and offering better protection for marine organisms.

Low Carbon Living

Promotion of Energy Saving

46. In response to the Council for Sustainable Development's recommendations on ways to further enhance energy efficiency, we will further review the Building Energy Codes published in February 2012 with a view to further tightening the minimum energy performance standards required of major building services installations. We will also review the grading structure and scope of product coverage of the Mandatory Energy Efficiency Labelling Schemes, which facilitate consumers to choose more

energy-efficient electrical products. In terms of infrastructural facilities, the District Cooling System at the Kai Tak Development (KTD) will begin its initial phase of operation in 2013. In tandem with the development programme of KTD, we will seek funding approval from LegCo to proceed with Phase IIIA of the project.

47. To promote community-wide participation, following the successful launch of the “Energy Saving Charter” scheme in June 2012, under which over 100 shopping malls in Hong Kong pledged to maintain the average indoor temperature in the common areas between 24-26°C during the summer months in 2012, we will review the operation of the scheme with a view to expanding its scope of coverage. Separately, having regard to the outcome of public consultation conducted earlier, we will launch a Charter Scheme with the trade to expedite the phasing-out of energy-inefficient incandescent light bulbs, while stepping up our publicity efforts to educate the public and major lamp users on the benefits of using more energy efficient lamps.

48. Meanwhile, the Government will continue to take the lead in promoting carbon audit as a first step towards carbon reduction. Last year, we embarked on a 3-year energy-cum-carbon audit programme at major government buildings and public facilities. The initiative has been progressing well and audits are being carried out at more than 40 such premises. We will continue to work with relevant bureaux and departments on this front.

External Lighting

49. To address the energy wastage and light nuisance problems that may be caused by excessive external lighting, apart from promulgating the Guidelines on Industry Best Practices for External Lighting Installations to encourage early improvement actions by stakeholders, we have set up a Task Force on External Lighting to advise the Government on the way forward to deal with external lighting issues in Hong Kong. The Task Force is looking into the various issues relating to external lighting and will submit its recommendations to the Government. We will take follow-up actions to address public concerns on external lighting having regard to the advice of the Task Force.

Green Community

Food Waste Recycling Projects in Housing Estates

50. The ECF launched the Food Waste Recycling in Housing Estates Scheme in July 2011. Under the Scheme, funds and technical support are granted to help participating housing estates to carry out food waste reduction promotion programmes as well as food waste recycling by on-site food waste composting facilities. Eleven housing estates have joined the phase 1 of the Scheme in 2012. We anticipate that the phase 2 of the Scheme would further support food waste reduction and recycling in another 45 housing estates in 2013/14.

51. In parallel, the Housing Department has initiated a trial of food waste recycling projects in six public housing estates. We have worked closely with Housing Department and share the experience gained.

Water Quality

Improving the Water Quality of the Harbour

52. The Harbour Area Treatment Scheme Stage 2A (HATS 2A) project is progressing on schedule. Upon the completion of the HATS 2A next year, the water quality of the Victoria Harbour will yet again see substantial improvement. To continue the efforts, we are examining the introduction of additional measures to further improve the water quality of the urban coastal waters.

Environment Bureau
January 2013

**“Carrot and Stick” Approach to Phase Out
Pre-Euro IV Diesel Commercial Vehicles**

Proposed Ex-gratia Payment for Owners

	Age of Scrapped vehicles and Ex-gratia Payment Level				
	18 years or above	16 years - below 18 years	13 years - below 16 years	10 years - below 13 years	Below 10 years
Those who do not seek replacement by newly registered vehicles	10%	12%	14%	16%	18%
Those who replace them with newly registered vehicles of the same class	18%	21%	24%	27%	30%

**Proposed Timetable for Non-renewal of Licences for
Pre-Euro IV Diesel Commercial Vehicles**

	Pre-Euro II	Euro II	Euro III
Date after which the vehicle licence will not be renewed	1 Jan 2016	1 Jan 2017	1 Jan 2019
Range of age of the vehicles by the proposed date of non-renewal of vehicle licence	Over 18 years	16 to 19 years	13 to 18 years

Annex II

Emission Reduction Plan for Hong Kong and PRDEZ (Up to 2020)

Pollutant	Area	Emission Reduction Targets / Ranges (as compared with 2010)	
		2015	2020
Sulphur dioxide (SO ₂)	Hong Kong	25%	35 - 75%
	PRDEZ	16 %	20 - 35%
Nitrogen oxides (NO _x)	Hong Kong	10 %	20 – 30 %
	PRDEZ	18 %	20 – 40 %
Respirable suspended particulates (RSP)	Hong Kong	10 %	15 – 40 %
	PRDEZ	10 %	15 – 25 %
Volatile organic compounds (VOC)	Hong Kong	5 %	15 %
	PRDEZ	10 %	15 – 25 %