

ACE Paper 2/2016 For discussion on 15 February 2016

2016 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) in the 2016 Policy Address.

KEY INITIATIVES

Air Quality

Embark on the Review of the Air Quality Objectives (AQOs)

2. Under the Air Pollution Control Ordinance, the Secretary for the Environment is required to conduct a review of the AQOs at least once every 5 years. In 2016, we shall embark on the review of the AQOs which took effect on 1 January 2014. The review will map out a new air quality management plan for further improving air quality and examine the scope for tightening the AQOs. We are now drawing up the work plan of the review and will consult this Panel as soon as we are ready.

Review of the Fifth Technical Memorandum for Power Plants

3. Power plants have to comply with statutory emission caps set by a Technical Memorandum (TM) issued under the Air Pollution Control Ordinance. The latest TM (i.e. the Fifth one) was promulgated on 16 December 2015 for setting the emission caps for 2020 onwards. It also stipulates that we will review it in 2016. In the coming review, we will take account of the timing and capacity of China Light and Power Hong Kong Limited's plan for installing new gas-fired units at its Black Point Power Station. Increasing the use of natural gas for electricity

generation would lead to lower emissions and could enable us to issue a new TM for imposing more stringent emission caps on power companies for 2021 onwards.

<u>Tightening of Vehicle Emissions Standards to Euro VI for Newly Registered</u> Vehicles

4. It is our standing policy to adopt the most stringent practicable standards for the emissions of newly registered vehicles. The prevailing vehicle emission standard is Euro V which has been in force since 2012. The European Union (EU) started in December 2013 the progressive adoption of Euro VI emission standard. Compared with their Euro V counterparts, Euro VI heavy duty¹ diesel vehicles emit about 80% less nitrogen oxides (NOx) and 50% less respirable suspended particulates (RSP) while Euro VI light duty diesel vehicles emit about 55% less NOx. We consulted this Panel about our proposal to adopt Euro VI emission standard on 27 November 2015 and received Members' support of tightening the statutory emission standards. Subsequently, we started consulting the relevant trades. We plan to report to the Panel later this year on the consultation exercise and our proposed way forward.

Promotion of Use of Electric Vehicles

- 5. The Government has been actively promoting a wider use of electric vehicles (EVs). A Steering Committee on the Promotion of Electric Vehicles chaired by the Financial Secretary was set up in 2009 to provide steer on the strategy and measures for the promotion. The number of EVs has grown from 96 in 2010 to 4198 by end 2015.
- 6. Like other places, private EVs should normally be charged at their owners' home or workplace. The public charging network is to provide primarily opportunity charging to extend their travel range when needed. In 2014, the Government completed the installation of 100 medium chargers at 16 government car parks. These medium chargers can reduce charging time up to 60% as compared to standard chargers. In the coming year, we will further enhance the public charging network, including upgrading more standard chargers to medium chargers, and will also facilitate property management companies to install more charging facilities.
- 7. As at end of 2015, the Pilot Green Transport Fund approved 85 trials with a total subsidy of about \$87 million to test out various green transport technologies including electric taxis, buses and trucks as well as hybrid trucks. We have been disseminating the findings of the trials to the transport trades with a view to encouraging them to adopt these new technologies.

Implementation of a Marine Emission Control Area in Pearl River Delta Waters

8. The Ministry of Transport (MoT) issued an implementation plan for controlling marine emissions in three major regions including the Pearl River Delta

¹ EU defines heavy duty vehicles as vehicles of design weight more than 3.5 tonnes, irrespective of their fuel types. Smaller vehicles are called light duty vehicles.

(PRD) region in December 2015. Under the plan, a marine emission control area (ECA) will be established in the PRD waters requiring ocean going vessels (OGVs) to switch to low sulphur fuel (with sulphur content not exceeding 0.5%) while at berth in PRD ports progressively from 2017. By 2019, all OGVs in the ECA are required to use low sulphur fuel. We will collaborate with MoT and Guangdong authorities on the setting up of the ECA.

Victoria Harbour Water Quality

- 9. With the full commissioning of Stage 2A of the Harbour Area Treatment Scheme (HATS) in December 2015, all sewage within the Victoria Harbour catchment is collected and centrally treated at the Stonecutters Island Sewage Treatment Works (SCISTW) before discharge. Water samples collected in the past three months (October to December 2015) indicate that the water quality of Victoria Harbour has improved after the diversion of sewage from Hong Kong Island to the SCISTW since end September 2015. The bacterial (i.e. *E. coli*) and biochemical oxygen demand (representing organic pollution load) levels, as compared with those over the first three months in 2015, have reduced by 74% and 20% respectively. We will continue to monitor the operation of HATS Stage 2A and assess the extent of improvement in the water quality of Victoria Harbour.
- 10. Due to residual pollution discharge, such as sewerage misconnections, aged and broken sewers, and polluted surface run-offs from streets, near shore pollution in Victoria Harbour is now our priority water quality concern. As a number of trunk sewers in Kowloon have been used for decades, we are actively preparing to rehabilitate these trunk sewers which will help reduce and prevent pollution. Moreover, we plan to construct dry weather flow interceptors at critical locations in Kowloon and Tsuen Wan to divert the polluted discharge to the foul sewerage for proper treatment. At the same time, we will commission a two-year consultancy study in early 2016 with the long-term objective of enhancing the leisure and amenity value of the coastal areas of Victoria Harbour. A series of inspection will be conducted including visual and odour patrol, field survey, water sampling and laboratory analysis to identify the pollution sources. Targeted pollution control measures and engineering solutions will be developed to reduce near shore pollution and further improve near shore water quality.

Combating Climate Change

11. In November 2015, the government launched the "Hong Kong Climate Change Report 2015" which outlines the efforts of the government and the private sector in responding to climate change. With the positive outcome of the Paris Climate Conference held in December 2015, we must prepare to make greater efforts to combat climate change not only within the Government but also in collaboration with various sectors of the community. The Chief Secretary for Administration will chair a newly established inter-departmental committee to steer and coordinate the work of various departments, with a view to formulating long-term climate strategy and actions.

12. In addition, publicity and education efforts will be stepped up to enhance public awareness of the effects of climate change, to facilitate exchange of ideas with the private sector and professional groups, and to promote a low-carbon lifestyle in the community.

Energy Conservation

Mandatory Energy Efficiency Labelling Scheme

- 13. Significant energy savings could be achieved by using more energy-efficient products, which helps reduce the emission of greenhouse gases and other air pollutants from power generation. The Mandatory Energy Efficiency Labelling Scheme (MEELS) was implemented in 2008 to require energy labels to be shown on the prescribed products to inform consumers of the products' energy efficiency performance.
- 14. MEELS currently covers five types of electrical appliances which account for around 60% of annual electricity consumption in the residential sector. Grading standards for three types of the appliances, i.e. room air conditioners, refrigerating appliances and washing machines (with a washing capacity at or under 7kg) have been tightened, and full implementation took place in November 2015. The current MEELS is expected to bring about an annual saving of 475 million kWh in electricity consumption. We have proposed extending the scope of MEELS to cover five more types of electrical appliances, i.e. televisions, washing machines (with a washing capacity of 7kg 10kg), room air conditioners (heat pump), electric storage water heaters and induction cookers, and will consult the LegCo EA Panel on 25 January 2016. We intend to introduce legislation to extend the scope of the Scheme within 2016.

External Lighting

- 15. To address the problems of light nuisance and energy wastage caused by external lighting, we launched the first-ever Charter on External Lighting in January 2016. The Charter, under which signatories pledge to switch off lighting installations of decorative, promotional or advertising purposes affecting the outdoor environment, will take effect in April this year. Signatories that have complied with the requirement to switch off external lighting from 11pm to 7am will be given the Platinum Award, while those complying with the requirement to switch off external lighting from midnight to 7am will be given the Gold Award. The awards will be presented in 2017. There are already close to 1000 properties and shops that have committed to sign the Charter in April 2016. These include premises from different sectors such as property development, building management, hotels and catering, retail, banking, travel and cinemas, as well as schools, public utilities and non-governmental organisations. We will continue to approach owners of external lighting installations and encourage them to sign up to the Charter.
- 16. In addition to the Charter, we will also re-launch the Guidelines on Industry Best Practices for External Lighting Installations (the Guidelines) to promote good practices in the design, installation and operation of external lighting installations in

the public and private sectors, including relevant professional associations and trade bodies. As for government properties, we have promulgated guidelines which require all government departments to switch off external lighting with decorative, promotional and advertising purposes at 11pm at all properties owned or managed by the Government, and to observe the good practices in the Guidelines.

Waste Management

Policy and Legislation

- 17. In line with our commitments under Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022, we will continue to undertake multiple and concurrent actions to drive behavioural change to reduce waste at source through policies and legislation
 - We will continue to pursue initiatives to create economic incentives for waste reduction and recycling. We are actively following up the recommendations of the Council for Sustainable Development by introducing the quantity-based charging scheme for municipal solid waste An interdepartmental working group has been set up to steer and coordinate the preparatory work for implementing the charging scheme, and we will aim at getting ready the legislative proposals for the enabling legislation as soon as practicable within the 2016/17 legislative session, i.e. the first session in the new Legislative Council term. In parallel, the Environment and Conservation Fund has earmarked a provision of \$50 million for funding community involvement projects, which would allow waste generators of different building types and relevant stakeholders to gain some early experience in waste charging and have an early start in reviewing its performance on waste reduction. The Fund has received the first batch of applications and the vetting is expected to be completed in around March 2016.
 - (b) We will continue our efforts in taking forward the legislative work relating to the producer responsibility schemes on waste electrical and electronic equipment (WEEE) and glass beverage containers. While the legislative proposals are under scrutiny by the Legislative Council, we will in parallel pursue the necessary complementary measures, including the development of the WEEE Treatment and Recycling Facility and progressive expansion of the collection network for glass containers.
 - (c) We also attach much importance to the handling of construction waste, which accounts for nearly one quarter of the daily MSW disposed of at landfills. To this end, we plan to introduce legislative proposals to raise the relevant charges for achieving full-cost recovery within the 2015/16 legislative session and will continue to explore other necessary measures to enhance construction waste management in Hong Kong.

Food Waste Reduction

18. We will step up efforts in mobilising the community to engage in the food wise culture under the Food Wise Hong Kong Campaign. One of the initiatives was the launch of the "Food Wise Eateries" Scheme in November 2015 to encourage the food and beverage sector to provide portioned menu to reduce food waste. We will continue with the food waste recycling and reduction projects at housing estates and give more support to non-governmental organisations in collecting surplus food for donation to the needy, with a view to achieving the win-win objective of waste reduction and caring for the needy.

Strengthening Regulation on Waste Cooking Oils (WCO)

19. To promote recycling of WCO and safeguard public health, the EPD has been collaborating with the Food and Environmental Hygiene Department to promulgate measures to ensure WCO generated from food premises is only handed over to WCO collectors, processors and exporters registered with the EPD. The parties involved are also required to maintain relevant transaction records for inspection. A three month public consultation on the legislative proposals on regulation of edible fats and oils and recycling of WCO concluded in October 2015., Having regard to the feedback in the consultation, we have initiated the preparatory work to amend the Waste Disposal Ordinance to provide legal backing to the regulatory measures on the handling of WCO.

Enhancing Waste-related Infrastructure

- 20. Apart from constructing new facilities, we are exploring the use of existing sewage treatment facilities for food waste/sewage sludge anaerobic co-digestion as an additional part of the network of organic waste treatment facilities to help reduce the capital and recurrent costs and at the same time accelerate the expansion of Hong Kong's food waste treatment capability. We have commenced the preparation work for a co-digestion pilot trial at the Tai Po Sewage Treatment Works to establish the technical feasibility and installation requirements. The results shall be the basis for devising the roadmap and action programme for future development.
- 21. As the existing and currently planned waste management facilities would not be able to deal with all the solid waste sustainably in future, there is a need to carry out a study to identify additional facilities to meet Hong Kong's longer term requirements. Based on the concepts of smart city and circular economy, the study will identify additional strategic and regional waste facilities required for bulk transfer and treatment of municipal solid waste and construction waste to meet Hong Kong's sustainable development needs up to 2041.

Nature Conservation

Strengthening Control of Trade in Elephant Ivory

22. The Government is committed to the protection of endangered species and abides by the Convention on International Trade in Endangered Species of Wild

Fauna and Flora (CITES) in the regulation of trade in endangered species including elephants. We have reviewed the regulatory regime of ivory trade and devised a suite of new/enhanced measures to step up enforcement against the smuggling and illegal trade in ivory, strengthen the control of local trade in ivory, and raise public awareness on the protection of elephants and the relevant control. These measures include stepping up joint operations and intelligence exchange with the Customs and Excise Department and overseas law enforcement agencies such as the World Customs Organisation and Interpol, deploying sniffer dogs to detect ivory at import and export control points, conducting a comprehensive check of all local ivory stock, using tamper-proof holograms to mark ivory, as well as using hi-tech radiocarbon dating analysis to determine the age and hence the legality of ivory.

23. We are also very concerned about the poaching of elephants in Africa. To contribute to the conservation of elephants, we will initiate the legislative procedures as soon as possible to ban the import and export of elephant hunting trophies. We would also actively explore other appropriate measures including enacting legislation to further ban the import and export of ivory and phase out local ivory trade, and imposing heavier penalties on smuggling and illegal trading of endangered species.

Biodiversity Strategy and Action Plan

24. We are formulating the first Biodiversity Strategy and Action Plan (BSAP) for Hong Kong based on the principles of the Convention on Biological Diversity and taking into account local needs and priorities. Last year, we held a three-month first-ever Hong Kong Biodiversity Festival jointly with local institutions and community organisations to enhance public awareness of the biodiversity of Hong Kong. We are now consulting the public on the formulation of the BSAP. Subject to the outcome of the public consultation, we would finalise the BSAP as soon as practicable, with a view to implementing the enhanced measures on nature conservation and supporting sustainable development in the coming years. The government has earmarked additional resources for taking forward the action items which include promoting awareness and knowledge of biodiversity among stakeholders and the general public, enhancing conservation of ecologically important areas and species, carrying out studies on biodiversity, and monitoring of the biodiversity trends.

OTHER ON-GOING INITIATIVES

25. We will continue to take forward a wide range of other on-going initiatives. A summary is at the **Annex**.

Environment Bureau February 2016

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On-going Initiatives

Area	Progress
Air Quality	
Air Quality Monitoring	The new general air quality monitoring station in Tseung Kwan O is now in test run. It will be in service in March 2016.
Cleaner Production Partnership Programme	• The two governments signed an agreement in November 2014 and set up the Hong Kong-Guangdong Joint Working Group on Cleaner Production in February 2015 to strengthen co-operation in promoting cleaner production to enterprises in the region. By the end of 2015, over 2,500 funding applications had been approved under the Cleaner Production Partnership Programme since the Programme's launch in 2008. In addition, the Hong Kong–Guangdong Cleaner Production Partners Recognition Scheme encourages enterprises to demonstrate efforts to pursue cleaner production. As at the end of 2015, 247 enterprises were holding valid commendations.
Regional Collaboration	 The Governments of Hong Kong and Guangdong will continue to collaborate and pursue air quality improvement measures under the Regional Air Quality Management Plan which focuses on power plants, vehicles, vessels and the heavily polluting industrial processes. Results of the Pearl River Delta regional air quality monitoring network from 2006 to 2014 show that the annual concentration levels of sulphur dioxide, nitrogen dioxide and respirable suspended particulates in the region decreased by 66%, 20% and 24% respectively. Both the Hong Kong Special Administrative Region and Guangdong Provincial Governments started the joint mid-term review in February 2015 to conclude the emission reductions for 2015 and finalize the emission reduction targets for 2020. The review is expected to be completed in 2017.

- The Governments of Hong Kong, Guangdong and Macao are jointly conducting a study on fine suspended particulates (PM_{2.5}) for the Pearl River Delta region to provide a robust scientific basis for mapping out effective strategies to further improve the regional air quality. As part of the study, a year-long concurrent field sampling programme in Hong Kong, Guangdong and Macao was completed in 2015. The three sides will then jointly analyse the air quality data for investigating the regional PM_{2.5} pollution and sources characteristics. The Study will be completed in 2017.
- A technical workshop with the Guangdong Environmental Protection Department on air pollution forecasting was conducted in November 2015. Both sides agree to have further exchanges in mid-2016.

Green Road Transport

- The Government set up franchised bus low emission zones (LEZs) at three busy corridors in Causeway Bay, Central and Mong Kok on 31 December 2015. The franchised bus companies (FBCs) are deploying low emission buses to ply the LEZs. The Kowloon Motor Bus Co. (1933) Ltd. and New World First Bus Services Limited have been meeting the requirement. Citybus Limited could only meet the target by 96% as at end 2015 and would fully meet the target by March 2016 when more low emission buses are available.
- FBCs are subsidized to retrofit selective catalytic reduction devices to some Euro II and III buses with a view to reducing their emissions. The project will complete by end 2016.
- The Government has also fully subsidized FBCs to procure six double-deck hybrid buses and 36 single-deck electric buses for trial. All the hybrid buses have been in operation since late 2014. The first batch of five electric buses have been in operation since December 2015 while the remaining ones would be put into service progressively in 2016.
- There were 244 electric vehicles in the Government fleet by end of 2015. 21 EVs were ordered in 2015 and will be delivered in 2016.
- Since the launch of an incentive-cum-regulatory scheme in March 2014, about 39 000 pre-Euro IV diesel commercial vehicles (i.e. about 47% of the

target vehicles) have been scrapped under the scheme as at end December 2015. Pre-Euro diesel commercial vehicles have been debarred from renewing their licences starting from 1 January 2016.

Victoria Harbour Water Quality

Harbour Area Treatment Scheme Stage 2A

Full commissioning of the Harbour Area Treatment Scheme (HATS) Stage 2A has brought the remaining 25% (about 500,000 m³/day) of sewage in the Victoria Harbour catchment to the Stonecutters Island Sewage Treatment Works for Chemically Enhanced Primary Treatment (CEPT) and disinfection.

Gas Safety

Enhancing Gas Safety

- Since the fire-cum-explosion incident that took place in Wong Tai Sin in April 2015, the Electrical and Mechanical Services Department (EMSD) which is responsible for enforcing the Gas Safety Ordinance (Cap. 51) has completed inspection of some 2 700 vehicle repair workshops (VRWs) to ensure that there is no over-storage of Liquefied Petroleum Gas (LPG) without approval, and that the maintenance, repair or replacement of LPG fuel systems or associated components and replacement of LPG fuel tanks is carried out by or under the supervision of a Competent Person. EMSD has also reminded the vehicle repair workshops and mechanics as well as the transport trade including taxi/mini-bus trade associations of the safe and proper maintenance requirements for the fuel system of LPG vehicles through the issue of letters, publication of information on the revamped webpage at EMSD's website, distribution of leaflets, and the conduct of technical briefings. Identification cards and certificates have also been issued to all Competent Person (Class 6) qualified for repairing the fuel system of LPG vehicles for display at conspicuous places inside their working vehicle repair workshop for easy identification by customers. EMSD has also issued a joint departmental notice with Buildings Department and Labour Department to remind vehicle maintenance workshops located at the ground level of residential and composite buildings of the legal and safety requirements in operating their workshops. Among others, maintenance of the fuel system of LPG vehicles is not permitted unless stipulated conditions are met.
- Looking to the future, EMSD will step up regular inspections and surprise checks of VRWs, and provide professional support and technical advice to the

	vehicle repair and maintenance trades in the area of gas safety in tandem with the technological developments of the fuel systems of LPG vehicles.				
Combating Climate Ch	aange				
Carbon Audit	• To take the lead in the promotion of carbon audits as a first step towards carbon reduction, the Government rolled out in September 2012 a three-year programme to conduct energy-cum-carbon audits for about 120 government premises and public facilities. The Programme was completed in 2015. We will continue to encourage bureaux and departments to conduct carbon audits alongside the energy audits for major government buildings and public facilities so as to identify room for carbon reduction.				
Waste Management					
Recycling Fund	 We have launched the \$1 billion Recycling Fund to assist recyclers to improve the collection network for recyclables, invest on machinery to lower the processing costs, develop value-adding recycled products, explore new market, obtain certification for the recycling process, attend training to enhance their skills and awareness of occupational safety and health etc. We have also set up small scale projects with smaller amount of subsidy and relatively simpler application procedures to facilitate applications from small and medium enterprises. We will take heed of the advice and recommendations of the Advisory Committee on Recycling Fund, which comprises experts, academics and people with experience in business management and community service, as well as representatives from various business and industry associations, in operating the Recycling Fund. 				
Clean Recycling	• We will step up our efforts to promote source separation and clean recycling at the community level under the publicity working group of the Environmental Campaign Committee to spearhead the clean recycling campaign. We will continue to encourage property management companies, green groups, schools and other community organisations to organise promotional activities, with the focus on clean recycling so as to increase the recovery quantities and the value of recyclables.				

Landfill Extensions	•	Following the approval of funding for the extensions of South East New Territories (SENT) and North East New Territories (NENT) landfills, as well as the consultancy for the extension of West New Territories (WENT) Landfill, EPD has commenced the contract procurement procedures for the SENT and NENT extension projects, and awarded the design and site investigation studies for WENT extension. We shall continue to implement these landfill extension projects.
Restored Landfill Revitalisation Funding Scheme	•	Application for use of the restored landfills is invited in batches. Batch 1 of the Scheme has been open to application from 27 November 2015 to 29 April 2016, which includes Ma Yau Tong Central (Kwun Tong), Pillar Point Valley (Tuen Mun) and Tseung Kwan O Stage I (Sai Kung) Landfills.
Integrated Waste Management Facilities (IWMF) Phase 1	•	After obtaining funding approval from the FC on 9 January 2015, we immediately commenced the pre-qualification exercise in March 2015 to invite interested companies to make submission for pre-qualification. Preparation works for tender documents are now in progress. We plan to invite tenders from the pre-qualified tenderers for the design, build and operate of the IWMF Phase 1 in 2016 and commission the facility in 2023.
Organic Waste Treatment (OWTF)	•	The Design-Build-Operate contract for the first phase of Organic Waste Treatment Facilities (OWTF) at Siu Ho Wan of North Lantau with a daily capacity of 200 tonnes was awarded in December 2014. The construction works are on-going and we plan to commission the plant in 2017. For the second phase of OWTF at Sha Ling of the North District with a daily capacity of 300 tonnes, we plan to commence tendering in 2016. The number and size of further OWTF development will depend on the progress of waste reduction. We will continue to base on the "Food Waste and Yard Waste Plan 2014-2022" to develop the remaining OWTFs, including identification of suitable sites and undertaking the planning works, as well as keeping an open mind on the development mode.
Green Procurement	•	We will continue to promulgate initiatives on multiple fronts to drum up more new business for green product market and benefit the environmental sector as a

		whole. We will facilitate the Government departments to follow the Government Green Procurement List which has been expanded from original 103 items to 150 items with updated green specifications. We will also proactively solicit support from the business sector and industry to promote green procurement, particularly in undertaking public works projects.
Nature Conservation		
Protection of Country Park Enclaves	•	The Agriculture, Fisheries and Conservation Department has invoked the statutory procedures under the Country Parks Ordinance. In October 2015, the Chief Executive in Council referred the approved maps of relevant country parks to the Country and Marine Parks Authority for replacement by new maps to incorporate three country park enclaves (namely Fan Kei Tok, Sai Lau Kong and the site near Nam Shan) into the respective country parks.
	•	The Planning Department has completed the preparation of Development Permission Area (DPA) plans for suitable country park enclaves, and has been taking steps to prepare Outline Zoning Plans to replace the DPA plans according to the statutory procedures.
Education and Publicity		
Environment and Conservation Fund	•	In 2015, the Environment and Conservation Fund approved over 140 projects initiated by the community with a total commitment of about \$185 million, covering energy conservation, waste reduction and recycling, minor works / demonstration, environmental research projects and education aspects. We will continue to provide support for community green actions.
Community Green Stations	•	The development of Community Green Stations (CGSs) has made good progress. The first two CGSs in Sha Tin and Eastern District have started operation in 2015. Construction works for five other CGS projects are underway and we are inviting tenders for three of the operation contracts. Six other CGS projects are at different planning stages and we will continue with site selection for the remaining five CGS projects.