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## **ACE Paper 1/2015**

*For discussion on 27 January 2015*

### **2015 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 2015 Policy Address.

#### **KEY INITIATIVES**

##### ***Air Quality***

##### **New Legislation to Control Emissions from Ocean-going Vessels (OGVs)**

2. Marine vessels have become the largest emission source of respirable suspended particulates (RSP), nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in Hong Kong. OGVs run on residual oil with an average sulphur content of 2.6%. SO<sub>2</sub> emissions from OGVs while at berth account for about 40% of their total emissions. To improve the air quality nearby the port areas, we shall introduce a new regulation to mandate all OGVs to use low sulphur fuel (fuel with sulphur content not more than 0.5%) while at berth in 2015.

3. We are also exploring with the Guangdong Government to study the feasibility for OGVs to switch to cleaner fuel while berthing at Pearl River Delta (PRD) ports with a view to maximizing the environmental benefits and maintaining a level playing field for ports in PRD.

### Trial of Electric Buses

4. The Government is fully subsidising the franchised bus companies to procure 36 single-deck electric buses for trials to assess their operational efficiency and performance under local conditions. The first batch of electric buses will commence operation progressively starting from the middle of the year.

### Improving Roadside Air Quality

5. Franchised buses are one of the major sources of roadside air pollution at busy corridors. In Causeway Bay, Central and Mong Kok, franchised buses could account for up to 40% of the traffic flow at these busy corridors. Setting up low emission zones (LEZs) by restricting access to low-emission franchised buses could bring improvement to the roadside air quality. The Government has been working with the franchised bus companies to set up LEZs in these three districts by restricting only low-emission buses in these zones by the end of 2015.

6. Kowloon Motor Bus Company Limited has estimated that they can deploy low-emission buses within the LEZs before end of 2015. The latest estimate of Citybus Limited (CTB) and New World First Bus Services Limited (NWFB) is that due to the possible delay of the new rail lines on Hong Kong Island, the slower than expected implementation of bus route rationalization and the increase in demand for low-emission buses in other districts, about 87% of the buses in LEZs will be low-emission buses by end 2015. We are examining with CTB and NWFB all possible alternatives for achieving the LEZ target the soonest possible.

7. We have been implementing an incentive-cum-regulating approach to phase out pre-Euro IV diesel commercial vehicles by end 2019. So far over 21 000 diesel commercial vehicles of pre-Euro, Euro I to Euro III standards had been scrapped by end December 2014. In addition, a remote sensing system to screen petrol and LPG vehicles with excessive emission has been launched since September 2014 and some 190 000 vehicles had been checked by mid-January 2015. These measures will reduce emission from vehicles and help improve the roadside air quality.

### New Legislation to Control Emissions from Non-road Mobile Machineries (NRMMS)

8. To reduce the air pollution arising from the emissions from NRMMS, we shall introduce a new legislation with a view to implementing an emission-control system for NRMMS newly supplied for local use starting from the middle of the year. We shall submit the new regulation to the Legislative Council very soon.

## Extension of Cleaner Production Partnership Programme

9. EPD, in collaboration with the Economic and Information Commission of Guangdong Province, launched a Cleaner Production Partnership Programme (the Programme) in 2008 to encourage and facilitate Hong Kong-owned factories in both Hong Kong and the PRD region to adopt cleaner production technologies and practices, thereby making a contribution to improving the regional environment, in particular air quality.

10. In the light of the encouraging environmental benefits brought by the Programme and positive feedback from the industries, we have earmarked \$150 million to extend the Programme for five years from 2015 to 2020. The funding required will be included and reflected in the 2015-16 Draft Estimates for EPD. We will continue to provide funding support for participating factories to carry out on-site improvement assessments and demonstration projects, as well as to strengthen technology promotion activities under the Programme. In addition, we will support the trade and industry associations to conduct trade-specific promotion and publicity activities with a view to leveraging on their networks and connections to reach out to more factories. We will further brief the Panel on the detailed proposal in February 2015.

## ***Water Quality***

### Water Quality of Victoria Harbour and Water Friendly Culture

11. Upon completion of Stage 2A of the Harbour Area Treatment Scheme this year, the water quality of the main body of Victoria Harbour will improve further. Near shore pollution in Victoria Harbour will become our priority water quality problem. To enhance the long term leisure and recreational values of the urban coastline of the Victoria Harbour, we are planning an “Urban Coastal Water Quality” consultancy study. Water quality monitoring and pollution source investigation will be conducted at the concerned areas. Practical options and programme to tackle the near shore pollution will also be formulated to help relevant Bureaux and Departments explore setting up water sports activities along waterfront areas of West Kowloon, Wanchai and Central. Beyond Victoria Harbour, the Government will continue to identify desirable locations to build new water sports centres.

## ***Combating Climate Change and Energy Conservation***

### **Reducing Electricity Consumption**

12. To conserve energy and combat the negative effects of climate change, the Government has been leading by example by setting electricity saving target. In 2009, we set a target of 5% saving in the total electricity consumption in government buildings from 2009/10 to 2013/14 under comparable operating conditions, using the electricity consumption in 2007/08 as the baseline. The Government has already met the 5% electricity saving target in 2013/14.

13. Building on our experience, we set a new target of 5% saving in the electricity consumption of government buildings in the next five years from 2015/16 to 2019/20 under comparable operating conditions, using the electricity consumption in 2013/14 as the baseline. We will introduce a series of measures, including the conduct of energy audits for major government buildings with comparatively high annual electricity consumption and more electricity saving potential to identify energy management opportunities. Bureaux and Departments will be invited to implement electricity saving measures and projects identified in the energy audits.

14. Promotion of energy saving requires concerted efforts of different sectors in the community. We will collaborate with all stakeholders including public organisations, private enterprises, professional bodies, green groups and local community groups etc. to promote a low carbon and energy efficient built environment in order to reduce the overall electricity demand of Hong Kong. Amongst various initiatives, the ENB will set up a dialogue platform with stakeholders to discuss ways to promote energy saving, and the launch of public education and publicity programmes that will include, among others, Energy Saving Charter on Indoor Temperature.

## ***Waste Management***

### **Policy and Legislation**

15. In line with our commitments under Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022 (The Waste Blueprint), we will continue to undertake multiple and concurrent actions to drive behavioural change to reduce waste at source through policies and legislation –

- (a) We will continue to pursue initiatives to create economic incentives for waste reduction and recycling. The Council for Sustainable

Development has submitted its report on the public engagement process on municipal solid waste charging. We are studying the recommendations set out in the report and aim to report to the Legislative Council (LegCo) on a framework plan for implementation of the charging early this year. In addition, we have already set up an inter-departmental working group to look into the relevant preparatory work and coordinate the actions of the concerned Departments. The working group will also continue to engage the community stakeholders on developing relevant details in connection with the future operational arrangements and to promote understanding of the objectives of the charging scheme with a view to cultivating behaviour change.

- (b) We will continue to progressively introduce producer responsibility schemes (PRS). We will introduce legislation in early 2015 for the implementation of the PRS on waste electrical and electronic equipment (WEEE). In parallel, we are seeking funding approval for the development of the WEEE Treatment and Recycling Facility. We are also actively preparing the PRS on glass beverage bottles, including the relevant legislative proposals and progressive expansion of the collection network for glass bottles.

#### Promotion of the Recycling Industry

16. Promoting waste recycling is a crucial part of our overall waste management strategy. To champion the sustainable development of the industry, the Government has earmarked \$1 billion to launch a Recycling Fund (the Fund). The Fund will be used to promote the recovery and recycling of waste by facilitating the upgrading of the operational capabilities and efficiency of the recycling industry. The Panel has indicated support to the Fund and we have been formulating details on use of the Fund in consultation with stakeholders. We are eager to launch the Fund soon after funding approval from the LegCo is obtained.

17. Furthermore, the Government has taken the lead in promoting recycling and reuse by adopting a green procurement policy. This helps generate demand for green products/services and sets an example to encourage others such as public organisations and the private sector to follow. Under the steer of the Inter-departmental Working Group on Green Government Procurement, we have been closely monitoring the market situation and making preparations to expand the green procurement list. We also plan to update relevant green specifications and verification methods to facilitate procurement and promote best practices. In addition, the Administration has also

been actively exploring the wider use of recycled and other environmentally friendly materials in public works projects.

18. To promote recycling of waste cooking oil (WCO), we have been working with the Food and Environmental Hygiene Department to request restaurant operators to dispose of their WCO to recognised oil collectors and recyclers. We also intend to strengthen regulation over the flow of WCO through introducing legislative amendments.

#### Waste-related Infrastructure

19. Even with our best waste reduction and recycling efforts, it is estimated that by 2017, there will still be about 10,000 tonnes of waste requiring disposal every day. Given the rapid successive filling up of the three existing landfills by 2019 while large scale waste-to-energy facilities are yet to come on stream by then, we have to proceed with the three landfill extension projects urgently as well as develop the integrated waste management facilities (IWMF) phase 1 and the organic waste treatment facilities (OWTF) phase 1 that would treat 3000 tonnes of MSW per day and 200 tonnes of food waste per day. Funding approval of the OWTF phase 1 was obtained from the Finance Committee in October 2014 and the design-build-operate contract was awarded in December 2014, with a view to commissioning the OWTF phase 1 in 2017. Furthermore, funding approvals from the Finance Committee were finally obtained in December 2014 for the extension of the Southeast New Territories Landfill and the Northeast New Territories Landfill and a detailed consultancy study for the West New Territories Landfill. Funding approval of the IWMF phase 1 was also obtained on 9 January 2015 and we will proceed with the pre-qualification and tendering process. We are committed to implementing these projects accordingly for timely commissioning of these essential waste management facilities. We are aware of public concerns on these projects and will continue to address them through district liaison groups with representatives from the District Councils, local community and other stakeholders.

#### Revitalisation of Restored Landfills

20. To expedite the development of suitable facilities at restored landfills, \$1 billion has been earmarked to set up a "Restored Landfill Revitalisation Funding Scheme" (the Scheme) to fund Non-profit-making Organisations (NPOs) or National Sports Associations (NSAs) to develop recreational facilities or other innovative proposals at restored landfills. To take the Scheme forward, a Steering Committee has been established to advise on the operational arrangement and other related matters of the Scheme. The Steering Committee is chaired by a non-official Chairman and

comprises members from the fields of accounting, architecture/engineering, sports, social services as well as representatives of District Councils with restored landfills. Representatives of concerned Bureaux/Departments also join the Steering Committee as ex-officio members.

21. We have sought the Panel's support on the establishment of the Scheme in July 2014. Under the Scheme, the following funding support will be provided to the selected applicant(s):—

- (a) One-off capital grant to cover the cost for the capital works and related matters of the selected projects, subject to a cap of \$100 million per project;
- (b) If justified, a time limited grant to meet the starting costs and operating deficits (if any) of the selected projects for a maximum of the first two years of operation, subject to a financial ceiling of \$5 million per project; and
- (c) Nominal rental for the restored landfill site.

22. We will seek approval of capital works funding for individual project by making submission to the Public Works Subcommittee and the Finance Committee after consulting the Panel pursuant to the established arrangement.

23. Furthermore, we have earmarked \$40 million to meet the starting costs and operating deficits, if any, for the first two years of operation of projects approved under the Scheme. The funding required will be included and reflected in the 2015-16 Draft Estimates for EPD. We are now working on the operation details of the Scheme and aim to invite applications by mid-2015.

### ***Nature Conservation***

24. Hong Kong is rich in biodiversity and has beautiful natural scenery including those in the countryside. We will work proactively with non-governmental organisations (NGOs) to enhance public and private collaboration and to create synergy on nature conservation works. To enhance the protection of sites with high landscape or recreational value, we have completed the incorporation of the country park enclaves at Tai Long Sai Wan, Yuen Tun and Kam Shan into country parks. With the support of the Country and Marine Parks Board, we are working closely with the Sai Wan local community to develop and implement a Sai Wan Management Plan, which will adopt a

new way of thinking with three interrelated objectives, namely, (1) the provision of a safe and pleasant place for country park-compatible recreation activities, (2) biodiversity enhancement and nature conservation, and (3) facilitation of ecotourism through engagement of local villagers. We will continue to assess the suitability of other country park enclaves against a set of established principles and criteria for incorporation into respective country parks.

25. We are also developing the Biodiversity Strategy and Action Plan (BSAP) based on the principles of the Convention on Biological Diversity and taking into account local needs and priorities and will consult the public on the draft BSAP in 2015.

## **OTHER ON-GOING INITIATIVES**

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

**Environment Bureau**  
**January 2015**



**2015 Policy Address**  
**Policy Initiatives of Environment Bureau:**  
**Environmental Protection**

**On-going Initiatives**

Area	Progress
<b>Air Quality</b>	
Greening Road Transport	<ul style="list-style-type: none"> <li>• As at end-2014, the Pilot Green Transport Fund approved 88 trials with a total subsidy of about \$101 million to test out various green transport technologies. We have been disseminating the findings of the trials to the transport trades with a view to encouraging them to adopt these new technologies.</li> <li>• Franchised bus companies are given subsidies to retrofit selective catalytic reduction devices to Euro II and III buses. They aim to complete the retrofit programme by end 2016. The Government has also funded the franchised bus companies to procure six double-deck hybrid buses and 36 single-deck electric buses for trial. All the hybrid buses started operation by end 2014 while the electric buses would commence operation progressively starting from the middle of the year.</li> <li>• Since the launch of an incentive-cum-regulatory scheme for retiring pre-Euro IV diesel commercial vehicles in March 2014, over 21,000 vehicles (i.e. about 26% of the target vehicles) were scrapped.</li> <li>• Since September 2014, we have been deploying remote sensing equipment to screen out petrol or liquefied petroleum gas vehicles with excessive emissions. The vehicle owners concerned are required to repair their vehicles within a prescribed period.</li> </ul>

Area	Progress
	<ul style="list-style-type: none"> <li>• There were 226 electric vehicles (EVs) in the Government fleet by end of 2014. 19 more EVs are expected to join the Government fleet in 2015.</li> </ul>
Reducing Marine Emissions	<ul style="list-style-type: none"> <li>• A new Regulation was enacted in April 2014 to tighten the sulphur limit of local marine light diesel from 0.5% to 0.05%.</li> <li>• The Government completed a technical feasibility study on installing an onshore power supply system at the Kai Tak Cruise Terminal and is formulating the next steps.</li> </ul>
Regional Collaboration	<ul style="list-style-type: none"> <li>• Results of the Pearl River Delta (PRD) Regional Air Quality Monitoring Network from 2006 to 2013 show that the average annual concentration levels of sulphur dioxide, nitrogen dioxide and respirable suspended particulates in the region had decreased by 62%, 13% and 15% respectively. 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 and the heavily polluting industrial processes.</li> <li>• The Governments of Hong Kong, Guangdong and Macao are jointly conducting a study on fine suspended particulates (PM2.5) for the Pearl River Delta region to provide a robust scientific basis for mapping out an effective strategy to improve the regional air quality.</li> </ul>
Air Quality Monitoring	<ul style="list-style-type: none"> <li>• EPD launched the Air Quality Health Index (AQHI) to replace the Air Pollution Index (API) on 30 December 2013. The new AQHI is a health risk-based index which estimates the short-term health risk caused by air pollution and provides</li> </ul>

Area	Progress
	<p>more timely and useful air pollution information to the public. Latest AQHI information are released to the public through the AQHI website (<a href="http://www.aqhi.gov.hk">www.aqhi.gov.hk</a>), mobile applications, i.e. the AQHI Apps, GovHK Notifications and a telephone hotline (No. 2827-8541). We shall strengthen the publicity of the AQHI to enhance the awareness of the public on this tool.</p> <ul style="list-style-type: none"> <li>• We are working on the establishment of a new general air quality monitoring station in Tseung Kwan O with a view to starting test-running for the station by end 2015.</li> </ul>
<b>Waste Management</b>	
Waste Reduction and Recycling	<ul style="list-style-type: none"> <li>• The Government unveiled the “Food Waste and Yard Waste Plan 2014-2022” in February 2014 to set out four main strategies as the backbone to tackle the food waste challenge, namely reduction at source, reuse and donation, recyclable collection, and turning food waste into energy, with a target of reducing food waste disposal to landfills by 40% in 2022.</li> <li>• We will continue to drive behavioural change and galvanize the community to avoid and reduce food waste at source. Over 380 organisations have signed the Food Wise Charter and joined hands to reduce food waste for the community. We will promote "Food Wise Eateries" to encourage the catering industry to provide portion menu to reduce food waste. We have also strengthened our support to the NGOs in collecting edible surplus or close-to-expire foods from the commercial sectors like supermarkets, wet markets, restaurants, clubs and hotels for donation to the needy in the community. The Environment and Conservation Fund has approved over \$12 million to eight NGOs to help them to organize collection of about 800</li> </ul>

Area	Progress
	<p>tonnes of surplus food for distribution to some 500,000 people.</p> <ul style="list-style-type: none"> <li>• Plastic Shopping Bag Charging will be fully implemented with effect from 1 April 2015; extensive publicity and public education programmes have been rolled out in preparation of that.</li> <li>• We will continue with our publicity efforts to engage the general public to reduce, separate and recycle waste. Promotion activities will be organised jointly with District Councils, property management trade, NGOs, green groups, schools and other community groups with focus on clean recycling. Messages on why and how to recycle clean would be disseminated to the community through API, posters, publicity leaflets, mobile application and a facelift of waste separation bins.</li> </ul>
Supporting the Recycling Industry	<ul style="list-style-type: none"> <li>• The Steering Committee to Promote the Sustainable Development of the Recycling Industry (the Steering Committee) chaired by the Chief Secretary for Administration has consulted the recycling trade and other relevant stakeholders for studying the specific uses of the Recycling Fund and designing its mode of operation. The overall idea is that the Recycling Fund would provide financial assistance to the recycling trade, NPOs and trade support organisations, with a view to strengthening their operations and increasing the quality and quantity of recycling output. A project-based approach which allows applicants to make proposals best fit the local situation and align with the Recycling Fund's objectives would be pursued. We aim to launch the Recycling Fund soon after we obtain funding approval from the Finance Committee.</li> <li>• The Steering Committee has been examining other</li> </ul>

Area	Progress
	<p>means to promote the sustainable growth and development of the recycling industry. This includes providing suitable infrastructure such as land sites and dedicated berths in Public Cargo Working Areas, training and development of the industry's workforce, encouraging research and investment in relevant technologies, and fostering community support for recycling and enhancing the collection network of recyclables.</p>
Waste Infrastructure	<ul style="list-style-type: none"> <li>• 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. 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 will complete the engineering feasibility study in 2015. The number and size of further OWTF development will depend on the progress of waste reduction. We will continue to look for suitable sites for the development of the remaining OWTFs and keep an open mind on the site selection and development mode.</li> <li>• We will commission a study in 2015 to develop a territory-wide long term plan for waste treatment and transfer facilities and identify additional waste facilities for bulk transfer and treatment of municipal solid waste and construction waste to meet Hong Kong's sustainable development needs.</li> </ul>
<b>Combating Climate Change and Energy Conservation</b>	
Carbon Audit	<ul style="list-style-type: none"> <li>• To take the lead in the promotion of carbon audits as a first step towards carbon reduction, we have conducted energy-cum-carbon audits in 58 government buildings and public facilities. Audits for another 62 government buildings will be completed upon end of the three-year</li> </ul>

Area	Progress
	<p>energy-cum-carbon audit programme in 2015.</p> <ul style="list-style-type: none"> <li>• A carbon footprint repository in the form of a dedicated website was launched on 15 December 2014, with a total of 64 listed companies uploading their carbon footprint information on the website for access by the public. The Government will continue to encourage more listed companies to disclose their carbon performance and to share successful experience in carbon management and practices through this website.</li> </ul>
Green Buildings	<ul style="list-style-type: none"> <li>• The inter-departmental Steering Committee for the Promotion of Green Building has considered a number of suggestions received from the stakeholders on possible ways to promote green building in Hong Kong. To take the lead, the Government is reviewing its existing green building policy on Government buildings with a view to further promoting green building in Hong Kong.</li> <li>• The Buildings Energy Efficiency Ordinance has been in full operation since September 2012. New buildings and existing buildings undergoing major retrofitting works are required to comply with the Building Energy Code, which stipulates the minimum energy efficiency standards for major building services installations including air-conditioning, electrical works, lighting, and lift and escalator installations. The Code will be regularly reviewed every three years to keep up with latest developments in technology. The first comprehensive review will be completed in 2015. The minimum energy efficiency standards for lighting installations have been tightened by 10-15% since February 2014.</li> <li>• The District Cooling System at the Kai Tak Development began its initial phase of operation in</li> </ul>

Area	Progress
	<p>2013, and has been providing service to the Kai Tak Cruise Terminal building and Ching Long Shopping Centre under the Hong Kong Housing Authority. We will continue to oversee its construction and operation to meet the demand for air-conditioning of public and private non-domestic developments. District cooling services to two primary schools are expected to commence in July 2015.</p>
External Lighting	<ul style="list-style-type: none"> <li>• The Task Force on External Lighting has studied the technical standards and parameters as well as implementation approaches adopted by overseas regimes in tackling light nuisance and energy wastage caused by external lighting, and assessed the applicability of those parameters to Hong Kong. The Task Force published in August 2013 the Document for Engaging Stakeholders and the Public to invite views on its findings and proposals. The engagement exercise was closed in November 2013. The Task Force is carefully considering the views received and plan to submit recommendations to the Government in early 2015.</li> </ul>
Energy Efficiency Labelling	<ul style="list-style-type: none"> <li>• The Mandatory Energy Efficiency Labelling Scheme currently covers five types of electrical appliances, making up around 60% of annual electricity consumption in the residential sector.</li> <li>• The new grading standards for three types of the appliances were announced in October 2014, and full implementation will take place in November 2015. The upgrading exercise can bring about an estimated annual saving of 300 million kilowatt-hour in electricity consumption and annual saving of \$300 million in electricity expenses respectively in Hong Kong.</li> </ul>

Area	Progress
<b>Water Quality</b>	
Improving Water Quality	<ul style="list-style-type: none"> <li>• The major works of Stage 2A of the Harbour Area Treatment Scheme (HATS) have been completed and all the sewage tunnels were successfully broken through in October 2014. Stage 2A of HATS will be commissioned within 2015.</li> <li>• We are preparing for the consultancy study to enhance the quality of the coastal waters of Victoria Harbour. Subject to funding approval, we plan to commence the study in 2015 for completion in 2017.</li> </ul>
<b>Others</b>	
Community Green Actions	<ul style="list-style-type: none"> <li>• The Council for Sustainable Development has completed the public engagement exercise on municipal solid waste charging and will look into other issues of public concern and engage the community in the process.</li> <li>• In 2014, the Environment and Conservation Fund approved over 450 projects initiated by the community with a total commitment of about \$220 million, covering energy efficiency, waste recycling, minor works/demonstration projects and education aspects. We will continue to provide support for community green actions.</li> </ul>
Community Green Stations	<ul style="list-style-type: none"> <li>• The development of Community Green Stations (CGSs) is in progress. The first two CGSs in Sha Tin and Eastern District will be commissioned within the first half of 2015. Site selection of the other nine CGS projects has been confirmed after consultation with respective District Councils. We will continue with consultations and site selections for the remaining seven CGS projects.</li> </ul>