

For information**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS****Promoting Green Economy****Introduction**

At the Legislative Council Panel on Environmental Affairs' meeting on 22 April 2011, Members suggested that the subject on promoting green economy be discussed at a subsequent meeting, and requested the Administration to submit an information paper. This paper highlights the measures taken by the Administration in promoting environmental industry as well as the way forward.

Environmental industry

2. Broadly speaking, environmental industry encompasses all goods and services associated with environmental protection, including waste collection, handling and recycling; design and operation of environmental infrastructure and products; works, services and products related to energy conservation and carbon reduction; design, installation and operation of environmental systems for compliance with regulations; environmental impact assessment and audit, and industries related to nature conservation. Indeed, the "Green DNA" exists in every trade and business.

3. There is a promising growth in local environmental industry in recent years. According to Government's statistics¹, the direct economic contribution (in terms of value added) and employment of environmental industries recorded \$4.7 billion (about 0.3% of Gross Domestic Product) and more than 32,000 (about 0.9% of the total workforce at that time) respectively in 2009, representing growth of 12.4% and 3.6% respectively over 2008.

¹ The coverage of the statistics related to environmental industry has been worked out by the Census and Statistics Department, having regard to the definition of environmental industry in other regions (such as the Organization for Economic Co-operation and Development). Hence the value added and job opportunities attributed by other industries, such as green building, green procurement and the Buildings Energy Efficiency Funding Schemes, are not reflected in such statistics. Hence, the economic contribution and the potential of environmental industry is in fact more than that being shown in current statistical figures.

Measures currently taken for promoting environmental industry

4. At its meeting in June 2009, the Task Force on Economic Challenges made policy proposals for promoting the development of six industries with good potential, including the environmental industry. The Government accepted and took forward the recommendations through concrete measures. As far as the environmental industry is concerned, key measures being taken are as follows.

Leveraging opportunities arising from development of environmental industry in the Mainland

5. To support local environmental services providers in developing the Mainland market, we launched a five-year Cleaner Production Partnership Programme (the Programme) in collaboration with the Guangdong authorities in 2008 to encourage and facilitate Hong Kong-owned factories in the Pearl River Delta region to adopt cleaner production technologies and practices. There are currently 88 local environmental technology services providers registered under the Programme to provide technical services for participating factories to adopt cleaner production. The Government has earmarked more than HK\$93 million for implementation of the Programme.

6. In addition, environmental services sector has been included in the liberalisation measures under the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA). It allows Hong Kong service suppliers to set up wholly-owned enterprises in the Mainland to provide environmental protection services. It also permits the Guangdong Province to approve the qualification of the Hong Kong service suppliers for setting up enterprises to operate environmental pollution control facilities in Guangdong.

7. With a view to further promoting the development of Hong Kong environment industries in the Mainland, the Government supports Hong Kong environmental services providers to participate in environmental services exhibitions in the Mainland, and helps organize related visits and exchanges. For instance, we are providing subsidies to enterprises for participating at the coming 12th China International Environmental Protection Exhibition and Conference scheduled for June 2011 in Beijing. We will arrange trade representatives to meet with relevant organizations and visit environmental facilities so as to gain a better understanding of the policy initiatives in the National Twelfth Five-Year Plan in promoting green economy. Response from the trade

has been positive. Such events will provide useful platforms for local environmental industries to share experiences and explore business opportunities with their Mainland counterparts.

Providing an international green platform

8. The increasing need for sustainable development, renewable energy and pollution management is leading to strong demand for environmental products and services all over the world. To provide a premier venue for environmental professionals from commercial, governmental and non-governmental sectors to meet, make business contacts, and establish business network, the Government has been actively supporting the annual Eco Expo Asia. The Expo has proven itself as a leading international trade platform for the environmental industry in the past five years, providing an international trading platform on the latest innovations in environmental products and services from around the world. The event has been well received by the trade. The 2010 Expo attracted 266 exhibitors from 19 countries and regions, 8011 visitors from 62 countries and regions and another 40-50 buying missions comprising more than 900 delegates.

9. The 2011 Eco Expo Asia will be held in late October. Both Hong Kong and the Guangdong Provincial governments will give full support to the Expo, and encourage participation of technology and services providers from the environmental protection and energy-saving sectors, with a view to promoting joint development of environmental industries at both places. We anticipate that the Expo will continue to attract strong participation of the trade from both international and Mainland markets. The professional platform provided by the Expo facilitates international exhibitors in entering the Mainland's fast-growing environmental market, while at the same time enables Chinese exhibitors to promote their advanced environmental technologies to a wider national and international audience.

Promoting local development of environmental industry

10. At a strategic level in promoting local environmental industry, the Government has been deploying huge amount of resources on environmental protection, which created extensive jobs and business opportunities for environmental protection sectors and engineering trades. Besides, all green policies and measures work together to help promote the environmental industry.

Enhancing energy efficiency

11. The Buildings Energy Efficiency Ordinance, enacted in November 2010, specifies the energy efficiency design standards for four key types of building service installations in specified buildings. The legislation aims to improve the energy efficiency of new buildings, as well as existing buildings when they undergo major retrofitting works. It also requires certain buildings to conduct energy audits. This brings along extra business opportunities for the trades relating to electrical, mechanical and building services.

12. To facilitate the public in choosing energy efficient appliances and raise public awareness on energy saving, the Government introduced the Mandatory Energy Efficiency Labelling Scheme (MEELS). Its initial phase covers three types of products, namely room air conditioners, refrigerators and compact fluorescent lamps, and has been fully implemented since November 2009.

13. The second phase of MEELS, which extends the coverage to washing machines and dehumidifiers, commenced in March 2010. It will be fully implemented in September 2011 after an 18-month grace period for the trades to make necessary preparations. We anticipate that the MEELS shall boost the sales of energy efficient products, bringing more green business opportunities for importers and retailers.

Promoting circular economy

14. In order to promote circular economy, the Government has implemented a series of initiatives to support the development of waste recycling industry. We have already rolled out programmes on source separation of waste to encourage the public to separate waste at source so as to increase the amount of local recyclables for collection. The Government has also provided an impetus to the development of recycling industry through various channels. Apart from promoting waste recycling, we will also continue to provide land on a long-term basis within the 20-hectare EcoPark for the development of recycling industry, with a view to encouraging investment in more advanced technologies and value-adding processes.

15. The six lots in Phase I of the EcoPark have all been leased out. We invited tenders in March 2011 for the first batch of the Phase 2 lots with an area of approximately 5 hectares. We also consulted relevant stakeholders and Legislative Council Panel on Environmental Affairs on

the proposed leasing arrangements for the Phase 2 lots. Stakeholders generally support appropriate adjustments to the leasing arrangements to enhance the attractiveness of EcoPark Phase 2 to potential tenants. For example, the lot size will be more flexible to suit operators' requirements; the tenancy will be lengthened to 20 years; the criteria of tender assessment will be enhanced; and more guidance and assistance will be provided to tenants, etc.

16. Waste plastics and waste electrical and electronic equipment (WEEE) currently have rather limited recycling avenues in the local market. To address the problem we have, through the Environment and Conservation Fund (ECF), provided funding to two non-profit making organisations to respectively manage and operate two waste recycling centres in EcoPark Phase 2 to provide a secured outlet for recyclables recovered. The waste plastics recycling centre and the WEEE recycling centre commenced operation in March and October 2010 respectively.

17. Separately, the Government will continue to identify suitable short-term tenancy (STT) sites for lease by recyclers through open tender. This will provide more land for the development of the recycling industry. There are currently 32 dedicated STT sites, occupying a total area of about 4.8 hectares. Waste recycled through these sites amounts to about 330,000 tonnes, and has an export value of about \$600 million.

18. The Producer Responsibility Scheme (PRS) is a key policy tool in the policy framework on "Reduce, Recycle and Proper Waste Management". With regard to the "polluter pays" principle, PRSs require stakeholders including manufacturers and importers of products, brand agents, distributors, retailers and consumers to share the financial or practical responsibility for the treatment or disposal of end-of-life products with a view to minimising the environmental impacts.

19. At the same time, PRS could promote the development of the local recycling industry through encouraging the stakeholders to recycle waste. Following the conclusion of the public consultation on the new PRS on WEEE in 2010, we will work out the implementation details with relevant trades within this year. In working out relevant detailed arrangements, we will consider a series of policies and measures regarding recycling and proper treatment of WEEE, including take-back by retailers, enforcement of landfill disposal bans, enhanced import and export control, etc. This will facilitate locally generated WEEE being locally treated, resulting in an expansion of the scale of existing treatment facilities. This will also promote the development of circular economy

and technological upgrades in local WEEE recycling, as well as create more job opportunities.

Promoting green procurement

20. The Government has been taking the lead to adopt a green procurement policy for promoting the development of green and recycling industry. This can also set an example to encourage the business sector to follow. Since 2000, the Government has commissioned consultants to develop green specifications for products commonly used by bureaux and departments. At present, the number of products on the Government procurement list with green specifications has been expanded to more than 100 items. The green specifications of these products have been uploaded to the website of the Environmental Protection Department (EPD).

21. Apart from pursuing green procurement for goods and services commonly used by bureaux and departments, works departments have worked to set up a mechanism to examine and carry out research for use of green materials in works projects. In particular, the Highways Department has mandated the priority use of concrete paving blocks with recycled glass content for road maintenance contracts since October 2010. Other works departments e.g. the Housing Department and Civil Engineering and Development Department will also use such paving blocks.

22. EPD and the Development Bureau have issued guidelines this year to encourage bureaux and departments to incorporate into routine or works related tenders green specifications/features as tender requirements for purchasing goods as far as possible, where technically feasible and economically rational. We aim to expand the scale of our green procurement through the guidelines.

23. Subject to the availability of suitable models on the market and the operational needs of bureaux and departments, we will give priority to electric vehicles (EVs) when replacing Government vehicles in the two financial years of 2011-12 and 2012-13. We expect to have an intake of close to 200 EVs of various types in these two years.

Promoting green scientific research

24. We have always been encouraging green research. To facilitate the development of renewable energy and environmental industries in

Hong Kong, the Hong Kong Science and Technology Parks Corporation commenced the development of the Green Technology cluster in early 2009. This helped strengthen Hong Kong's edge in advancing technologies in the above areas. Green technology companies already attracted to the Science Park include those in the areas of energy efficiency, environmental engineering and consultancy, energy/environment products as well as nanotech and advanced materials. Tertiary institutes have also been enhancing their research and development (R&D) on green and energy conservation technologies in recent years, which on the one hand groom more talents, while on the other hand create more opportunities for collaboration of scientific research and commercial application.

Wider adoption of green transportation

25. Promoting the use of EVs will not only improve roadside air quality, but will also create business opportunities for industries in Hong Kong that are related to EVs. The Government has been actively promoting the development of EVs in Hong Kong through various means, including forming a steering committee chaired by the Financial Secretary to give policy steer, providing financial incentives to encourage private enterprise as well as members of the public to consider EVs when buying cars, etc. Besides, the Government is also actively developing EV charging network through collaboration with the non-government sector.

26. In promoting R&D on green transportation, the Government established the Hong Kong Automotive Parts and Accessory Systems R&D Centre in April 2006 to facilitate the transfer of technology of R&D findings to the automobile industry. Over the past five years, the R&D Centre embarked on 16 projects in relation to hybrid or EVs with funding of over \$44.25 million. A series of related projects is also under planning at the moment. Moreover, MyCar, an EV developed by a local manufacturer, has been provided with funding support from the Innovation and Technology Fund and has launched its sale since October 2009.

Providing financial incentives

27. To improve Hong Kong's air quality, the Government has been offering a one-off grant to owners of Euro II diesel commercial vehicles to encourage them to replace their vehicles with new ones from 1 July 2010 to 30 June 2013.

28. To encourage the use of environment-friendly petrol private cars with low emissions and high fuel efficiency, starting from 1 April 2007, a 30% reduction in the First Registration Tax (FRT) has been offered to buyers of newly registered environment-friendly petrol private cars, subject to a cap of HK\$50,000 per car. To encourage the use of environment-friendly commercial vehicles, which have low emissions, starting from 1 April 2008, reduction in 30-100% FRT has been offered to buyers of newly registered environment-friendly commercial vehicles. Vehicle owners buying environment-friendly commercial vehicles can enjoy tax concessions and contribute to the development of green transport.

29. The Government has set up a \$300 million Pilot Green Transport Fund for application by the transport sector from end of March 2011. The Fund subsidizes and encourages the transport sector to test out green and low-carbon transport technology. This will help improve the roadside air quality and promote a low-carbon economy. Furthermore, it will extend business opportunity for green transport technologies and help nurture the development of green technologies in Hong Kong.

30. Besides, the ECF has been supporting non-governmental sectors in taking forward projects for environmental protection. ECF provides resources to a number of strategic partners including charitable organisations, schools and local non-governmental organisations, etc., in rolling out projects with different themes relating to environmental protection, which helps raise public attention on environmental protection and Government's major green initiatives. Since its establishment in 1994, the ECF has funded more than 2 600 projects.

31. To encourage the public to take concrete actions to enhance buildings energy efficiency, the ECF had allocated \$450 million to subsidise owners of residential, industrial and commercial buildings to carry out energy-cum-carbon audits as well as energy improvement projects. The two funding schemes have been well received by the community since its launch in April 2009. Up to mid-May 2011, more than 1 350 applications have been received. Among them, 724 applications have been approved and the grant amounts around \$280 million, benefiting more than 4 500 buildings. The total electricity saving of the approved applications is estimated to be 131 million kWh per annum, which is equivalent to a reduction of carbon dioxide emissions by 92 000 tonnes. Job opportunities of more than 45 400 man-months have been created for the trades.

Promoting eco-tourism

32. Promotion of natural attractions will entice nature lovers to visit Hong Kong. Their spending in Hong Kong will bring us economic benefits. The Agriculture, Fisheries and Conservation Department is partnering with the Tourism Commission and the Hong Kong Tourism Board (HKTB) in promoting nature-based tourism products including the Hong Kong Wetland Park, Hong Kong National Geopark, the hiking trails and other green attractions of Hong Kong via HKTB's promotional platform "Great Outdoors Hong Kong".

Way forward

33. The extensive coverage of green economy includes not only traditional environmental industries and trades that we are more familiar with. In fact, the operations of every trade and enterprise entail some green factors. By focusing on how to reduce the consumption of natural resources, enhance resource efficiency and productivity, or adopt the mode of operation or commercial decision that are most friendly to the environment, we would be able to identify the green factors in various trades and business operations. Additional business and development opportunities would be created as well.

34. We believe that environmental industry is not a standalone and distinct industry. Its greatest potential lies in the huge opportunities in every trade and business. The Government will continue to take the lead and implement various measures, and through the concerted efforts of the community, to make Hong Kong the greenest city in the region. We will continue to take forward different initiatives along, key directions as set out in the ensuing paragraphs.

Progressing in line with national development

35. The National Twelfth Five-Year Plan has set out the future strategies in promoting green development and building a resource-efficient and environment-friendly society. Hong Kong's environmental service providers can capitalize on their vast experience to introduce advanced environmental technologies, and management expertise and systems, facilitate scientific research and leverage on the production base in the Greater PRD Region. They may play a useful role in providing support to industries and factories in the PRD Region in adopting cleaner production, and assisting Hong Kong-owned enterprises

in their upgrading and restructuring processes. With the support of policies and regulations from the Mainland and participation of the enterprises, it will generate substantial market demand and bring about considerable business opportunities for local enterprises in the field of environmental technologies, services and resource management. We will continue to encourage Hong Kong's environmental industry to seize such opportunities by making use of the CEPA liberalization measures.

Deploying resources to support green infrastructure

36. The Government will continue to deploy substantial resources to environmental protection, not only to achieve our policy objective on environmental protection, but also to help promote the development of green economy. We have set out our target to develop various waste treatment facilities in the policy framework on "Reduce, Recycle and Proper Waste Management" announced in January this year. We have selected Siu Ho Wan in North Lantau as the site for the development of the first phase of Organic Waste Treatment Facilities (OWTF), which will have a daily treatment capacity of around 200 tonnes for source separated food wastes from commercial and industrial establishments. Biological treatment will be employed to produce usable resources such as biogas and compost. The first phase of OWTF is expected to commence operation in 2014. EPD will conduct engineering investigation and environmental impact assessment studies for the development of the second phase of OWTF in Sha Ling in North District, which will have a treatment capacity of 300 tonnes per day. The two phases of OWTF together can process 500 tonnes of food waste per day. Separately, we are planning for the Integrated Waste Management Facilities with a daily capacity of handling 3 000 tonnes of municipal solid waste.

37. To promote energy conservation and energy efficiency, the Government will implement a first-of-its-kind District Cooling System at the Kai Tak Development to provide centralized water-cooled air-conditioning system to public and private non-domestic developments in the region. The construction works of Phases I and II commenced in early 2011. More than \$1.86 billion will be injected for the construction works and about 1 035 jobs will be created, involving job opportunities of a total of 30 600 man-months.

38. The Legislative Council has just approved an injection of \$500 million into ECF, enabling it to fund projects that match new green policy areas and the needs of the community, while at the same time supporting the development of green economy.

Promoting development of green economy through policy and measures

39. Besides deploying resources, all environmental policies and measures pursued by the Government will also help boost the development of environmental industry. To reduce the emission of greenhouse gas and air pollution brought by power generation, we shall continue to take forward various policies and initiatives regarding energy conservation and carbon reduction, many of which will also help promote a low carbon economy. Examples include the promotion of water-cooled air conditioning system, expanding the scope of application of energy efficiency standards for home electrical appliances, enhancing buildings energy efficiency through information technology products and smart building energy management systems, etc. The Buildings Energy Efficiency Ordinance, which will come into full operation in 2012, will also bring new business opportunities for electrical and mechanical as well as building services trades.

40. Besides, to encourage waste recycling and reduction, we plan to extend the PRS on plastic shopping bags (i.e. the environmental levy scheme on plastic shopping bags) and have launched the public consultation on this. In our publicity and public education regarding the environmental levy, we also encourage the public to recycle plastic shopping bags that could not be reused further. The Government will continue to implement various voluntary PRSs in collaboration with relevant trades. With the direct participation of and funding from the trades, these schemes not only provide free recycling service to the public and the trades but also encourage and boost the development of relevant logistics and recycling industries.

41. To further facilitate the research and application of renewable energy, the Hong Kong Science and Technology Parks Corporation has decided that Science Park Phase 3 (construction works to commence soon) would focus on areas related to green technology and renewable energy, for attracting more green-tech companies to establish a presence in Hong Kong. Phase 3 will commission from late 2013 to 2016, and is expected to give momentum to the development of advanced green technology in Hong Kong.

42. Members are invited to note the content of this information paper.

Environment Bureau
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