



## **Our Expectations for the Next Chief Executive**

Four green groups (World Wide Fund – Hong Kong, Friends of the Earth (HK), Clean Air Network, Greenpeace) call on the next Chief Executive to include the following suggestions covering Air Quality, Climate and Energy, Planning and Conservation, and Waste Management in his political platform:

### **Air Pollution**

- 1 Stop stalling and update the Air Quality Objectives (AQOs) through an executive directive with a timetable for interim and long-term objectives for meeting the World Health Organization's Air Quality Guidelines (AQG) to safeguard public health.
- 2 Commercial diesel vehicles (mostly buses and trucks) emitted 88% and 76% of total suspended respirable particulates and nitrogen oxides respectively in Hong Kong in 2009. Thus, roadside air pollution has been seriously eroding the public's health, which calls for immediate retirement of old diesel vehicles. Economic incentives like subsidies for vehicle replacement should be given.
- 3 Formulation of air policies should involve the Department of Health.

### **Energy and Climate**

- 1 Revise 2020 electricity consumption projections and fuel mix composition
- 2 Set goals for electricity demand-side management
- 3 Reform Scheme of Control Agreement
- 4 Draft Guangdong and Hong Kong energy cooperation agreement
- 5 Promote green buildings

### **Have Holistic Conservation Policy and Planning**

- 1 Plan and conserve through inter-departmental cooperation
- 2 Enhance cross-boundary environmental protection partnership
- 3 Develop sustainable policies with clear action objectives

### **Waste Management**

- 1 Implement producer responsibility bill on beverage containers
- 2 Impose waste levy by volume
- 3 Have a food waste policy

## Details of the Proposal

### **Air Pollution**

Air pollution is the biggest threat to public health in Hong Kong, causing eight deaths per day. The economic loss related to air pollution in 2011 amounted to \$40 billion.<sup>1</sup> According to a study, one in every four people emigrating from Hong Kong did so because of the air pollution to the detriment of the city's competitiveness.<sup>2</sup> Roadside emissions have been growing despite a general decline in air pollutants, which threaten the public's health. The Chief Executive, as a figurehead of the HKSAR, is obligated to clear up the smog on the roadside to protect the public's health.

#### **1. Update Air Quality Objectives immediately and be accountable for the 19 measures to improve air quality**

The Air Pollution Control Ordinance has been in force since 1987. For more than 20 years, it has not moved on with a new set of standards. The Environment Bureau announced on 17 Jan 2012 that the AQOs would be updated and legislation would proceed accordingly. The earliest enforcement for new AQOs is expected to be by 2014. But the Ordinance (Amended L. N. 165 of 1984; L. N. 57 of 1994) stated that, "The Secretary shall, after consultation with the Advisory Council on the Environment, establish for each air control zone air quality objectives or different objectives for different parts of a zone." It simply means the legislation procedure can be bypassed to quicken the pace of renewal.

We count on the CE candidate to pledge to update the AQOs through an executive directive in his term of office and implement the new standards in 2012, and set a timetable of interim and long term targets for meeting the WHO's AQG. The Environmental Protection Department recommends that PM2.5 concentrations to be 75 and 35 microgram per cubic metre for the daily and annual average respectively, which are three and 3.5 times the WHO standards. Our tolerable standards, worse than those adopted by some developing countries like India and Bangladesh, are too loose to safeguard public health. A timetable for meeting international standards is imperative.

#### **2. Reduce Roadside Tailpipe Emissions**

According to the study by the Hong Kong University of Science and Technology<sup>3</sup>, local pollution is the main source of Hong Kong's air pollutants for more than half of the year (53%). This makes air pollution a local issue. Power plants, the biggest air polluters, pose a lesser threat to the public's health than tailpipe emissions. Improving roadside

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<sup>1</sup> School of Public Health, The University of Hong Kong – Hedley Index: <http://hedleyindex.sph.hku.hk/>

<sup>2</sup> Civic Exchange –Less Talk More Action(2010) ( <http://www.civic-exchange.org/wp/less-talk-more-action/>)

<sup>3</sup>The Hong Kong University of Science and Technology – Relative Significance of Local vs. Regional Sources: Hong Kong's Air Pollution(2007) [http://www.civic-exchange.org/eng/upload/files/200703\\_HKAirPollution.pdf](http://www.civic-exchange.org/eng/upload/files/200703_HKAirPollution.pdf)

air quality should be made a priority. Commercial diesel vehicles (mostly buses and trucks) emitted 88% and 76% of total suspended respirable particulates and nitrogen oxides respectively<sup>4</sup>. The government should provide bigger economic incentives and impose heavier penalties to expedite diesel vehicle replacement.

The incentive scheme for replacing commercial vehicles by new ones should raise the grant offers to car owners to make it more attractive. We recommend grants be extended to owners for old vehicle disposal. Subsidies to franchised bus companies for retiring old buses should be encouraged. Up to 75% of buses on the streets are wearing out (including pre-Euro, Euro I and II models), and buses contribute 40% of tailpipe emission on the road.<sup>5</sup> We don't recommend the government to cover all the replacement cost, but a compensation formula taking into account the attrition rate of old buses for early replacement can be an option.

The current proposed plan for a Low Emission Zone prohibits only franchised buses running on designated routes which are quite short. The CE incumbent, Donald Tsang, pledged in the 2010 Policy Address that low emission zones would be marked in heavily polluted areas like Central and Mongkok. CE candidates should extend the zone to all polluted areas (Wanchai and Tung Chung for example) and vehicle types, as a means to effectively protect the health of residents and passersbys.

### **3. Formulation of Air Policies Should Involve the Department of Health**

Air pollution causes eight deaths and 20,000 doctor visits every day. It supersedes SARS and swine flu as a threat to public health. Putting air policy formulation solely in the hands of the Environmental Protection Department (EPD) excludes the consideration of its impact on public health. The Department of Health should be included when formulating air policies and a task force with representatives from the EPD, the Transport Department, Hong Kong Observatory etc, should be set up for collaboration to tackle air pollution.

## **Energy and Climate**

*Hong Kong's Climate Change Strategy and Action Agenda* proposed in 2010 by the government claimed to be a demonstration of its climate responsibility, but ironically the proposal suggested increasing the use of nuclear power to reduce greenhouse gas emissions. It would for sure do more damages than remedies. The meltdown of Fukushima nuclear plant told us that nuclear energy was never safe. We believe that the new CE should put aside plans for more nuclear power and lead the society towards conservation and developing renewable energy.

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<sup>4</sup> Subcommittee on Improving Air Quality (CB(1) 1250/09-10(01)- Early Replacement of Old Diesel Commercial Vehicles(10 Mar 2010) [http://www.legco.gov.hk/yr09-10/chinese/panels/ea/ea\\_iaq/papers/ea\\_iaq0310cb1-1250-1-c.pdf](http://www.legco.gov.hk/yr09-10/chinese/panels/ea/ea_iaq/papers/ea_iaq0310cb1-1250-1-c.pdf)

<sup>5</sup> A quote from Edward Yau, Secretary for the Environment, at the meeting of the Panel on Environmental Affairs, on 29 July 2009

## **1. Revise 2020 Electricity Consumption Projections and Fuel Mix Composition**

The Environment Bureau's consultancy report predicted that Hong Kong's electricity demand will grow by about 40% by 2020, which also served as the basis for the government's proposal to increase the nuclear uptake from Guangdong to 50% of HK's total electricity demand by 2020. Such projection is contradictory to the current electricity consumption which has been in decline for the past 20 years. Over projection of energy demand will not only give the power companies an excuse for heavy investment but also the need to increase tariff. It would also create a demand to increase the import of Guangdong's nuclear power. The new government should re-evaluate Hong Kong's electricity demand and set clear energy conservation targets to maintain the overall electricity consumption at the current level to avoid the need for increasing nuclear power supply.

## **2. Set Goals for Electricity Demand-Side Management (DSM)**

Relying on a change of fuel mix in electricity supply to reduce emissions is far insufficient to realize the ambition for a low carbon city. Unlike the heavily populated and developing mainland China, Hong Kong as a developed city has the responsibility and resources to implement DSM but we are still poorly behind other best practices. Political will is what it takes to implement aggressive DSM measures to reduce carbon emissions, a responsibility trusted in developed cities. The government currently proposed to reduce 80% of carbon emissions by doubling nuclear power. But energy saving alone can reduce 25% of electricity consumption, which enable us to maintain the level of nuclear import to the current volume and reduce our risks of further reliance on nuclear energy. Clear DSM targets can help reduce energy consumption, and create a huge job market and economic opportunities, precedents of which can be found in London, Singapore, Taiwan and California. The consensus of the society, including a partnership between the government and the energy sector, precedes the success of DSM towards the goal of becoming a low carbon city.

DSM means reducing peak electricity demand and overall electricity consumption without compromising service quality. The aim for its implementation is to avoid the needs for power plant expansion or equipment investment, including building new grids or seeking new power supply. The actions to be taken include: adoption of energy efficiency or saving projects by the existing power plants, encouraging users to apply for DSM service, providing or installing energy saving products for users, installing 'smart' metres for users, offering economic incentives to users etc. Many developed cities have enforced DSM measures to reduce fossil fuel consumption and emissions of carbon dioxide. Studies show that measures adopted in places like China or other countries can reduce overall electricity consumption and peak electricity demand by 20% and 40% respectively.

Benefits of DSM for power plants, users and the society:

- Reduce pressure for tariff increase;

- Alleviate air pollution;
- Reduce emissions of greenhouse gases;
- Ease the demand for new power plants, supply and investment for transmission equipment;
- Reduce dependency on energy import;
- Create job opportunities (by developing new energy saving technology);
- Reduce the operation cost of the private sector and increase the city's competitiveness.

### **3. Reform Scheme of Control Agreement**

Hong Kong government only signed a Scheme of Control Agreement with the two power companies instead of a proper energy policy. The Agreement allows the two power companies to have certain profits in relation to investment. Continued and growing investment has become the habit of the two power companies in pursuit of higher profits. Tariffs are not regulated in the Agreement and big electricity users in the commerce and industrial sectors are given huge discounts by the power companies. This has created imbalance in the cost sharing of users, resulting in higher tariffs for the residential clients, small and medium-sized enterprises. The tariff increase proposed by the two power companies earlier this year has sparked outrage in the society, which highlighted the fact that the Agreement protects neither the environment nor the benefits of the whole society. Reform must be carried out when the Agreement is to have a mid-review in 2013 for its expiry in 2018. New mechanisms that tie the performance in energy efficiency with profit guarantee, or rules to bring in competition should be assessed and deliberation should be open and transparent for public consultation, if the public interest is to be upheld.

### **4. Draft Guangdong and Hong Kong Energy Cooperation Agreement**

There is huge room for cooperation between Hong Kong and Guangdong Province in energy. Guangdong has planned to develop offshore wind farms capable of generating 1500MW by 2015 and 8000MW by 2020. The new government should negotiate for supply of wind power from Guangdong and allow the two power companies to build wind farms beyond Hong Kong waters, inching into the Pearl River Delta territories. This should make the wind power undertaking a cost-effective investment. The new government should also be able to benefit from Guangdong's plan to develop solar power and smaller wind turbines and expect 10% of local power supply to come from renewable energy by 2020. Daya Bay Nuclear Power Plant would continue to be a persistent threat to safety and the new government should create an independent board to monitor the plant and work out a contingency plan with Guangdong authorities.

### **5. Promote Green Buildings**

Buildings consume 89% of Hong Kong's electricity. Green buildings are the answer to reduce greenhouse gas emissions, air pollutants and dependence on nuclear power. Legislation for green buildings should be on the work list of the new government, like

making BEAM Plus-- rating of greenness of a building—compulsory. Inclusion of BEAM Plus in land auction should give the property developers reason to make green buildings. A financial sweetener is another driving force to entice developers to build green buildings. Successful examples can be found in Baltimore where buildings that have LEED silver rating of greenness, could be granted a 40% property tax credit. Buildings that have the gold rating will earn a 60% property tax credit. The credit to be granted could be as high as US\$5 million. These are all measures to be considered to promote green buildings.

## **Have Holistic Conservation Policy and Planning**

HKSAR ratified the Convention on Biological Diversity in 2011. The Convention has three goals: conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits arising from genetic resources. As a signatory, Hong Kong is obligated to meet the targets set by the Convention and formulate holistic and cross-departmental policies for nature conservation.

### **1. Plan and Conserve Through Inter-Departmental Cooperation**

Aichi targets made in the Convention on Biological Diversity require the signatories to integrate the value of biodiversity into the development and planning process. The progress in implementing the nature conservation policy issued in 2004 has been slow. Recent pitches by the government to build incinerators and reclaim in areas outside Victoria Harbour have strayed from the path set by the Convention and showed a lack of commitment by the government in nature conservation. There is a disconnect between planning and environmental protection in the current government policy structure. A holistic conservation policy has to be conceived to progressively protect endangered species and lands of private and public that have ecological values. The whole society should be mobilized to conserve nature. Environmental impact should be considered when planning for Hong Kong's overall development. Nature conservation cannot just rely on separate environmental impact assessments for individual projects without a holistic vision. Cross-departmental decision has to be coordinated to make plans for Hong Kong's long term development and biodiversity conservation.

### **2. Enhance Cross-boundary Environmental Protection Partnership**

Cross-boundary cooperation is essential to the sustainable development of Hong Kong and its neighbouring cities. Cross-boundary planning in conservation and protection of ecosystems is of paramount importance for the upkeep of the habitats of wildlife. These habitats include: Robin's Nest (the eco-corridor between Hong Kong and Shenzhen), Mai Po Inner Deep Bay Ramsar Site and bordering wetlands, Pearl River Estuary (Chinese White Dolphin habitat). Guangdong, Shenzhen, Hong Kong and Macau authorities should work concertedly for sustainability. The best practices should be worked out for protection of lands of high ecological value in Hong Kong's jurisdiction. With the plan to open closed areas at the frontier impending, planning for the Robin's Nest becomes urgent. Inter-departmental communication and coordination is necessary

for the build up of a protection network.

Officials from Guangdong, Hong Kong and Macau, representatives from relevant NGOs and technical expertise should be present on committees and a task force set up to facilitate community engagement, exchange of experiences and public participation in decision making process. NGOs and academia are important partners of the government action planning and habitat identification.

### **3. Develop Sustainable Development Policies with Clear Objectives and Actions**

A policy framework of sustainable development is currently missing in Hong Kong, especially in addressing the cumulative environmental impacts of various large infrastructure development projects. Despite incessant social clashes in the past decade on environment and development issues, (such as the proposal to use parts of the country parks as landfill sites), Hong Kong continues to lack a fundamental change of mindset in planning towards sustainable development, leaving the future generations to pay for the accumulated environmental destruction caused by us today. The new government should set assessable and clear goals to be achieved when formulating sustainable development strategies. A coordination body comprising chief officials should be established to make decisions that involve cooperation from various policy making bureaus. Strategic Environmental Assessment (SEA) that requires support in policies, monitoring mechanism and execution should be an important task of the new government to address the cumulative environmental impacts of many existing and upcoming development projects.

## **Waste Management**

The exponential growth of waste in Hong Kong has only partly to do with an influx of mainland tourists. The habitual inclination to resolve on landfills and incineration for end-point waste treatment is to be blamed. Expansion of landfills or construction of incinerators will only push up the cost of waste treatment and fire up community opposition to the introduction of such facilities to the neighbourhood. We recommend:

- 1 Promote source reduction and supplement it with the introduction of a producer responsibility scheme, waste levy by weight, food waste recycling etc. to curb the growth of waste generation. The new CE should pledge not to build more than one incinerator with a capacity to treat 3000 tonnes of waste a day in his term of office.

- 2 Develop waste industry to create job opportunities;

- 3 Provide assistance to those whose livelihood is affected.

In short, source reduction should be the rationale for Hong Kong's waste management strategy

## **1. Implement Producer Responsibility Bill on Beverage Containers**<sup>6</sup>

The sum of bottles, both glass and plastic, dumped every year in Hong Kong is three billion. A bottle deposit system that charges drink manufacturers for the operation cost of bottle disposal is conducive to reducing annual disposal volume.

### **Effectiveness :**

- Economic cost to grassroots : there should not be extra cost to them if deposits can be collected upon return of bottles;
- Improve the livelihood of scavengers : deposits will motivate scavengers for a thorough search for every bottle thrown away;
- Waste reduction performance : examples in California showed that a deposit system can reduce the disposal of bottles by more than 70%;
- Support in the Legislative Council : with exceptions of a few legislators from the commerce and industry sector, there should not be difficulties in gaining support from most legislators concerned with the welfare of grassroots and labour;
- Positive outcomes: the deposit mechanism benefits the development of a recycling industry without incurring extra cost on consumers.

## **2. Impose Waste Levy by Weight**

In recent years, the household waste volume has been in decline while the commercial and industrial volume is having an upward curve. The producer responsibility scheme can be implemented in two stages by charging the waste growing sector, the latter first, and target the households later.

- Public education and announcements should precede the implementation of the scheme;
- Waste fees collected should be counted as a separate income not to be absorbed into the treasury for public support;
- Provide a small amount of free plastic bags to grassroots to cash-strapped citizens;
- Remove the charge on waste treatment from the property rates to avoid double charging.

### **Effectiveness :**

- Waste reduction performance : foreign examples proved that waste disposal

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<sup>6</sup> The deposit system was considered feasible in a consultancy report commissioned by the Environmental Protection Department. Foreign examples showed that it can effectively reduce waste. More can be found in a FoE (HK) commentary, *Promote Recycling to Provide Shelter for the Livelihood of the Grassroots*.

[http://www.foe.org.hk/welcome/gettc.asp?language=tc&id\\_path=1,7,28,151,4572,4636](http://www.foe.org.hk/welcome/gettc.asp?language=tc&id_path=1,7,28,151,4572,4636)

charge by volume can significantly reduce overall waste volume and stir up recycling;

- Gaining public approval : a central fund should be set up for deposits of waste fees collected for investment in promoting waste reduction and recycling to gain public approval;
- NIMBY effect : nobody would like to have incinerators and landfills in their back yards, such as stories in Taiwan and Korea have shown. Local opposition is unlikely to die down unless efforts are made to reduce waste at the source;<sup>7</sup>
- Public support : with a comprehensive recycling system in place, the monthly waste disposal expenditure for a household on average is from HK\$10 to HK\$30, based on Taiwan's charge rates. The expenditure is far less than they use to pay when the rate was charged by the amount of water consumed every month. Removing waste treatment charge from the property rates would offset the expenditure on waste disposal, and for the cash-strapped grassroots, provision of free plastic bags would lessen the bite on their purses;
- Political parties response : the Democratic Party, Civic Party and the DAB had expressed support in principle for the charging system.

### **3. Have a Food Waste Policy**

A four-prong policy is needed to face the challenge of reducing 3200 tonnes of waste generated in Hong Kong every day :

#### **3.1 Mandatory source reduction**

- Implement waste charging system by volume soon and provide economic incentives for reducing food waste;

#### **3.2 Set up community recycling station**

- Install a comprehensive recycling system and add a food waste collection bin to the existing three-color bin set at housing estates, streets to collect food waste from the commercial, industrial and household food waste. The food waste collection points should be found in all 18 districts;

#### **3.3 Build more organic waste treatment facilities aside from ones planned at Sha Ling and Siu Ho Wan**

- The Organic Waste Treatment Facilities in Siu Ho Wan and Sha Ling that are to be in operation by 2014 and 2016 respectively can only process 500kg of food waste a day in total, less than 15% of daily food waste generated. At least three to four more such facilities should be built in the next five years to lengthen the lifespan of

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<sup>7</sup> More ideas on this can be found in FoE (HK) books, *Waste Reduction in Taiwan*, and *Seoul Green*  
[http://www.foe.org.hk/welcome/gettc.asp?language=tc&id\\_path=1,%207,%2028,%20151,%204572,%204649](http://www.foe.org.hk/welcome/gettc.asp?language=tc&id_path=1,%207,%2028,%20151,%204572,%204649)  
[http://www.foe.org.hk/welcome/gettc.asp?language=tc&id\\_path=1,%207,%2026,%203008,%204863](http://www.foe.org.hk/welcome/gettc.asp?language=tc&id_path=1,%207,%2026,%203008,%204863)

landfills and incinerators. Refuse transfer stations or underground caves are both suitable locations for such facilities in response to community opposition;

### 3.4 Reducing food waste –Green living

- Shark's fin soup and deep sea fish are gradually disappearing from banquets, why cannot a healthy dining culture with less food waste be adopted? The government should set a model in this area for the private and public sector to follow.