

**Confirmed Minutes of the 170<sup>th</sup> Meeting of  
the Advisory Council on the Environment  
held on 17 May 2010 at 2:30 pm**

**Present:**

Prof Paul LAM, JP (Chairman)  
Prof CHAU Kwai-cheong (Deputy Chairman)  
Dr Dorothy CHAN, BBS  
Mr Oscar CHOW  
Ms Betty HO  
Mr Michael JEBSEN, BBS  
Mr Edwin LAU, MH  
Ir Dr LO Wai-kwok, BBS, MH, JP  
Dr MAN Chi-sum, JP  
Dr Alfred TAM  
Mr TSANG Kam-lam  
Dr Ray YEP  
Prof Ignatius YU  
Mr Carlson K S CHAN (Secretary)

**Absent with Apologies:**

Ms Teresa AU  
Prof FUNG Tung  
Prof Joseph LEE  
Mr Michael LEE  
Prof WONG Ming-hung  
Mr Simon WONG, JP  
Dr YAU Wing-kwong

**In Attendance:**

Ms Anissa WONG, JP	Permanent Secretary for the Environment
Mr C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Mr C T LING	Assistant Director/Technical Services, Planning Department
Ms Esther LI	Acting Principal Information Officer, Environmental Protection Department (EPD)
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Mr Steve TSOI	Executive Officer (CBD), EPD
Miss Kim KWAN	Executive Manager (CBD), EPD

### **In Attendance for Agenda Item 3:**

Mr W C MOK	Assistant Director (Air Policy), EPD
Mr Edmond HO	Principal Environmental Protection Officer (Mobile Source), EPD

### **In Attendance for Agenda Item 4:**

Miss Katharine CHOI	Principal Assistant Secretary (Energy), Environment Bureau
Mr Michael WONG	Electrical and Mechanical Engineer/Project, Electrical and Mechanical Services Department

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### **Agenda Item 1 : Confirmation of the draft minutes of the 169<sup>th</sup> meeting held on 19 April 2010**

The draft minutes were confirmed without amendments.

### **Agenda Item 2 : Matters arising from the minutes of the 169<sup>th</sup> meeting held on 19 April 2010**

2. There were no matters arising from the minutes of the last meeting.

### **Agenda Item 3 : Pilot Green Transport Fund** ***(ACE Paper 8/2010)***

3. Mr Edmond Ho briefed Members on the proposal to set up a \$300 million Pilot Green Transport Fund (the Fund) to encourage the transport industry to introduce more innovative green technologies and to test out green and low-carbon transport technologies with a view to improving air quality and reducing carbon emissions.

4. A Member noted that the key objectives of the Fund were to improve air quality and reduce carbon emissions but these two objectives might sometimes be conflicting under certain circumstances. He asked which objective would be given priority in vetting the applications. Mr W C Mok explained that some technologies might be able to reduce air pollutants but at the same time increase fuel consumption and thereby increase carbon emissions. Under such

circumstances, the initial view was that serious consideration would be given to the proposed technology if the target air pollutants were pollutants which were difficult to be reduced or the reduction could, on balance, bring about substantial benefits on roadside air quality.

5. A Member supported the initiative. He considered that the funding of \$300 million was not a huge amount and thus it was necessary to be extremely selective on the use of the fund by focusing on quality rather than quantity of applications approved. The key issue was how to apply modern green transport technologies to the unique circumstances of Hong Kong having regard to the geographical characteristics and modes of transport. Basic research and development should not be covered under the Fund but research on the viability and feasibility of green technologies in Hong Kong and comparison between Hong Kong and other urbanized cities overseas should be supported. He also shared with Members his observations in attending a recent conference on e-mobility where participants considered that real changes on the choice of mode of transport would only occur when there were legislative requirements as voluntary measures were costly.

6. A Member considered that in order to make use of the Fund gainfully, it was important to set out targets and principles on the use of the Fund with an overall plan on the implementation time frame as well as assessment criteria and parameters to evaluate the effectiveness of the Fund, such as the definition of low carbon vehicles. Another Member agreed that it would be useful to provide a set of benchmarks to assess the effectiveness of the Fund.

7. A Member supported the proposal. However, she worried that the introduction of green vehicles would give a wrong impression to vehicle owners that driving a green vehicle would not bring about air pollution problems. This would lead to even worse aggregate impacts. It was important to strike a balance when formulating the details of the Fund.

8. A Member fully supported setting up of the Fund which could be considered as one of the carrots to encourage transport trades to help alleviate the problem of roadside emissions. He considered that the initiative should be rolled out as early as possible. A major yardstick in vetting the applications should focus on the level of reduction of roadside emissions by a certain technology. To make the Fund more attractive, additional rewards could be given to successful

applicants who could prove that the technologies could achieve substantial reduction of emissions.

9. A Member considered the Fund a good initiative. In view of the urgent need to improve roadside air pollution, the Fund should cover a wider spectrum of transport industry, including goods vehicles which were a major roadside emission source. On the duration of each project, he considered that a time frame should be given to the trial period, say a maximum of 24 months, to ensure the delivery of trial results within a reasonable time frame.

10. A Member considered that priority should be given to goods vehicles as they were key roadside emission sources and there were no alternatives to replace these vehicles while there were substitutes for passenger vehicles. The idea of Electronic Road Pricing should be seriously considered to help alleviate the emissions in central business areas.

11. A Member supported the initiative. He considered that priority should be given to applications for retrofitting or upgrading of in-use vehicles given the large fleet size. Moreover, successful applicants should be required to demonstrate commitments to making use of the proven technologies for wider application. Another Member agreed that priority should be given to green technologies for goods vehicles and in-use vehicles.

12. A Member noted that applicants of the Fund would be encouraged to pair up with research institutes or relevant stakeholders. He asked whether research institutes could apply for the Fund themselves. Mr W C Mok explained that it was essential for the applicants to be members of the transport trades as the primary objective was to encourage transport trades to adopt green technologies and ascertain whether the technologies were suitable in the local environment. As the transport operators might not know the new green technologies well, they were encouraged to pair up with research institutes or relevant stakeholders in their applications. For the purpose of research and development of innovative technologies by research institutes, there were other funding sources, such as the Innovative Technology Fund.

13. A Member supported the suggestion that the transport operators could submit joint applications with potential suppliers of green transport technologies. She noted that the supercapacitor bus which was a battery-based

electric vehicle with rapid charging function at bus stops had been in commercial operation in Shanghai for a few years. The Kowloon Motor Bus Company in Hong Kong was going to introduce this type of bus for trial in the local environment. Moreover, consideration should be given to examining the impact of geographical distribution of buses in urban areas, better fleet management and improvement of the tram system which was an environment-friendly mode of transport and explore the feasibility of converting some Euro diesel buses to trolley buses.

14. A Member supported the setting up of the Fund. He asked whether the introduction of innovative green transport technologies already available in overseas countries could be covered under the Fund. Mr W C Mok explained that it could be covered under the Fund as the emphases of the initiative were the introduction of green technologies which were new to Hong Kong and the trial of these technologies in the local context. For example, local franchised bus companies could apply the Fund for introducing double-decker buses using hybrid technology available in London to Hong Kong.

15. A Member suggested that reference be made to the Innovative Technology Fund administered by the Innovation and Technology Commission (ITC) when formulating details on the actual operation of the Fund. Another Member considered that the scope of the Fund should be clear and would not overlap with those of other existing funds, such as the Automatic Parts and Accessory Systems (APAS) administered by the ITC which provided funding for research and development of low carbon automobile technologies. The Fund should focus on trials of new green transport technologies under local constraints rather than conducting basic research. Close dialogue should be maintained with the ITC, such as inviting transport operators to try out new technologies developed under the APAS. This would not only help achieve synergy benefits, but also enable commercialization of locally developed green technologies.

16. A Member enquired about the ownership of intellectual property rights, if developed, in the process of exploring green technologies by the transport operators and technology providers as well as the issue of exclusivity of proven technology which would inhibit the wider use of the technology. Mr W C Mok said that the intellectual property rights should rest with the party who invented the technology or product under prevailing legislation. The purpose of the Fund was to encourage transport trades to adopt green technologies

and test out the suitability of these technologies for operation in the local environment for wider use in the transport industry.

17. A Member asked about the views expressed by stakeholders in the briefing session held in March 2010 and whether they raised the issue of maximum percentage of contribution. Mr W C Mok said that the briefing with stakeholders was held to gather initial views on the Fund. The response of participants was positive. Having regard to the views collected from relevant parties, an implementation framework for the Fund would be mapped out in light of further consultation with the stakeholders. Participants of the briefing did not raise the issue of maximum percentage of contribution. Nonetheless, enquiries were received from transport trades from time to time about more details of the Fund relating to electric or hybrid vehicles.

18. A Member enquired about the timing of updating Members about further details of the proposal. Mr W C Mok said that the plan was to work out the detailed proposal in the third to forth quarter of 2010 and the Council would be consulted. Another Member asked whether the Council would be involved in the vetting of applications under the Fund. Mr W C Mok said that a committee would be set up to examine the applications and a third-party would be commissioned to evaluate the environmental performance of technologies under trial, collate data and report the outcome. The Administration undertook to report the progress on the applications for the Fund to the Council in due course.

19. The Chairman summarized Members' views as follows –

- (a) the Council supported the setting up of the Pilot Green Transport Fund to encourage the transport industry to introduce more innovative green technologies with a view to improving air quality, reducing carbon emissions and thereby helping to avert global climate changes. This would also help nurture the budding of green technologies for promoting a low-carbon economy;
- (b) the Council suggested setting out targets, principles and benchmarks for consideration of the applications and evaluation of the effectiveness of the Fund;
- (c) the Council considered that the Fund should focus on introducing

green transport technologies and testing out of the technologies in the local environment rather than conducting basic research and development. The successful applicants should be required to demonstrate commitments to making use of the proven technologies for wider application;

- (d) the Council considered that goods vehicles should be included under the Fund in view of their impacts on roadside emissions and priority should be given to technologies applicable to goods vehicles and in-use vehicles;
- (e) the Council considered that a time frame should be imposed on the trial periods of approved applications, such as a maximum of 24 months, for demonstrating the outcomes; and
- (f) the Council suggested that the Administration should maintain close dialogue with ITC and holders of other existing research funding schemes with a view to achieving synergy benefits.

**Agenda Item 4 : Environment and Conservation Fund - Buildings Energy Efficiency Funding Schemes**  
***(ACE Paper 9/2010)***

20. Miss Katharine Choi briefed Members on the progress of the implementation of the Buildings Energy Efficiency Funding Schemes (the Schemes) set up under the Environment and Conservation Fund with the objective of improving electricity efficiency of buildings which was instrumental in bringing down greenhouse gas emissions and improving air quality. Under the Schemes, \$150 million was earmarked to subsidize owners of residential, commercial or industrial buildings to carry out energy-cum-carbon audits (ECA) and another \$300 million to conduct energy efficiency projects (EEP). The Schemes had been opened for application since 8 April 2009. As at 31 March 2010, 1,078 applications were received, covering a total of 7,600 buildings, i.e. about one in six of the 41,600 buildings in Hong Kong had submitted applications.

21. The Chairman enquired about the balance of the Fund. Miss Katharine Choi said that \$76 million out of \$450 million had been allocated for 346 applications involving 2,200 buildings and the balance of the Fund was \$374

million as at 31 March 2010.

22. A Member noted that 78% of the approved EEP applications were on lighting installations. He enquired about the common types of lighting installations. Mr Michael Wong said that most of the applications involved the replacement of existing lighting installations by Light-emitting Diode (LED) lightings in communal areas which would result in substantial energy savings. For example, a fluorescent emergency or exit lighting normally consumed 14 watts of electricity while a LED exit lighting consumed about 3 watts. A spotlight in the podium normally consumed 400 to 800 watts while a LED lighting consumed 60 to 100 watts. Besides LED lightings, some buildings replaced T8 fluorescent tubes with T5 fluorescent tubes, resulting energy savings by about half.

23. A Member noted that the bulk of EEP applications came from residential buildings and asked about the reasons for the low participation rate of commercial buildings which accounted for only 8% of the applications. Miss Katharine Choi explained that the number of applications was in proportion to the categories of buildings in Hong Kong. At present, there were only about 2,000 pure commercial buildings, accounting for about 5% of the total number of 41,000 buildings. Nonetheless, efforts would continue to be made to encourage applications from commercial buildings, especially in the aspects of reducing electricity consumption by central air-conditioning as about 70% of energy consumed in communal areas in commercial buildings was attributed to central air-conditioning.

24. A Member noted the much smaller number of applications for ECA than those for EEP. He enquired about measures to be taken to encourage building owners to invest in ECA which would be instrumental for reviewing energy performance of buildings and formulating effective energy efficiency plans. Miss Katharine Choi said that building owners were inclined to apply funding for EEP at the early stage as the projects were easier to implement and results were more visible. It was anticipated that building owners would take a step forward to apply funding for ECA to conduct carbon audits in order to identify rooms for improvement in energy efficiency. To encourage more applications for ECA, publicity would be stepped up to promote the benefits of conducting ECA by highlighting successful examples and worthiness to conduct ECA. Experience showed that some energy efficiency operations could be



cost-neutral, such as by switching off some lifts after office hours, and the cost for conducting ECA could be recovered by electricity tariff saved.

25. A Member considered that the Schemes should focus more on retrofitting old or single buildings and small-scale housing estates which might not have sufficient resources to carry out energy efficiency projects. The Schemes could be regarded as an education programme to encourage the installation of energy efficiency facilities in these buildings. For new buildings and large housing estates, the property developers were more willing to incorporate environment-friendly features to project a positive image of the buildings. Miss Katharine Choi said that to help tackle the difficulties encountered by building owners, in particular old or single buildings, a manned hotline was set up to answer enquires and facilitate their submission of applications. Briefings were held at local community level to reach out to owners of old or single buildings, such as through local social service organizations.

26. A Member suggested that an analysis of special features of building blocks in Hong Kong be conducted for formulating effective energy efficiency measures to fit local circumstances, such as the heavy reliance on air-conditioning systems. Newly designed compressor units for air-conditioning systems would help reduce substantial energy consumption in certain types of buildings.

27. A Member noted that the Schemes were well received by building owners. Feedback from some property management companies was that the Schemes helped them solicit the support of owners' corporations in installing energy efficiency facilities. Nonetheless, the processing time of the applications should be shortened as the residents would like to see the installations being in place as early as possible.

28. A Member was glad to note the encouraging response to the Schemes. Nonetheless, he noted that the level of carbon emissions reduced through the Schemes only accounted for less than 0.1% (33,100 tonnes) of 39 million tonnes of total carbon emissions in Hong Kong as the scope of the Schemes was limited to communal areas of certain types of buildings. In order to meet the national target of reducing carbon intensity by 40% to 45% in ten years' time, a territory-wide programme was necessary to promote carbon emission reduction practices inside the premises. Miss Katharine Choi agreed

that it was important to promote a low carbon economy through territory-wide programmes. The Schemes were only one of the measures to achieve the objective. Other measures such as the District Cooling System to be installed in Kai Tak area would provide high energy efficient air-conditioning for non-residential buildings in the area. The Mandatory Energy Efficiency Labelling Scheme for electrical appliances rolled out in November 2009 could facilitate the public in choosing energy efficient appliances and raise public awareness. With the implementation of various measures, the overall impacts would gradually be materialized.

29. A Member considered that it would be useful to develop energy consumption benchmarks to promote energy conservation in Hong Kong. The benchmarks would be necessary for changing the mindset of local people in balancing social acceptability and environmental acceptability as people had got used to the concept of illumination as a symbol of prosperity. In revitalizing old industrial buildings for non-industrial uses, the Building Energy Codes should be applied to these industrial buildings. The Administration should spearhead initiatives to conserve energy by adopting energy efficiency practices in governmental buildings. To achieve noticeable results in energy savings, it would be necessary to mandate the measures by legislative means. It would also help change the mindset of the general public in leading a low carbon life style.

30. Miss Katharine Choi explained that the Administration had been working along the line. The Buildings Energy Efficiency Bill was introduced to the Legislative Council in December 2009 for mandatory implementation of the Building Energy Codes. The Bill would cover a wide range of buildings including buildings for residential, commercial, industrial, government, municipal and social uses. The Building Energy Codes would stipulate the minimum energy performance standards on lighting, air-conditioning, electrical, and lift and escalator installations. As regards revitalization of industrial buildings, the Environment Bureau had been discussing with the Development Bureau to encourage relevant building owners to apply for funding under the Schemes to build in energy efficiency features in industrial buildings to be retrofitted.

31. A Member suggested that the Administration should appeal to the support of corporations with emphasis on their social responsibility. Incentives should be provided to corporations, especially small and medium enterprises, for rolling out energy saving measures and documenting the energy consumption

patterns. Many corporations were looking for opportunities to promote their green images. Being a modern world city, Hong Kong should spearhead in this aspect with the advance of technology. Miss Katharine Choi said that the Hong Kong Award of Environmental Excellence set up by EPD in 2008 aimed to offer recognition to companies and organizations which excel in energy conservation, carbon reduction or other outstanding environmental performance. Similar recognition schemes were also offered by some non-governmental organizations for encouraging the adoption of green management and benchmarking their commitments towards environmental excellence.

32. A Member was glad to note the progress of the Schemes. He noted that the funding for each project was rather limited in view of the large number of buildings and the level of reduction in carbon emissions was relatively low in terms of the total carbon emissions. He considered that the Schemes, however, could serve educational purpose which was equally important. Evaluation of the Schemes should not only be in terms of reduction in carbon emissions, but also in terms of public awareness on energy conservation brought about by the Schemes. He suggested advising successful applicants to display the positive results of implementing energy saving measures to tenants to further promote low carbon life style.

33. A Member asked whether schools were eligible under the Schemes as it would serve good educational purpose. Miss Katharine Choi explained that while schools were not eligible under the Schemes, they were eligible to apply for funding under another scheme of the Environment Conservation Fund through which they could get a maximum of 100% grant for implementing energy saving projects and renewable energy projects which could serve educational purpose.

34. A Member noted that cross-sector briefings and experience sharing sessions were conducted and it would be useful to post the experience and tips onto the website for reference by other building owners. Miss Katharine Choi explained that some presentation files regarding the experience on energy conservation by some property developers had been uploaded onto the website of the Schemes. Potential applicants could make reference to the information in formulating proposals.

35. The Chairman summarized Members' views as follows –

- (a) the Council was glad to note the progress of the Building Energy Efficiency Funding Schemes in encouraging the public to take concrete actions to enhance building energy efficiency which was instrumental in bringing down greenhouse gas emissions and improving air quality;
- (b) the Council considered it necessary to put forth strategies to encourage more building owners to apply for funding to conduct energy-cum-carbon audits which would help review energy performance of buildings and formulate effective energy efficiency plans;
- (c) the Council suggested that greater effort be made to roll out territory-wide programmes to raise public awareness and social responsibility of corporations in order to encourage energy saving measures not only in communal areas of buildings but also inside the premises to achieve the overall target of reduction of carbon emissions; and
- (d) the Council suggested shortening the processing time of applications as far as possible for implementation of energy efficiency installations in buildings.

**Agenda Item 5 : Any other business**

**Tentative items for discussion at the next meeting**

36. The agenda was being compiled. Members would be informed in due course.

**Agenda Item 6 : Date of next meeting**

37. The next meeting was scheduled for 14 June 2010.

**ACE Secretariat**  
**May 2010**