

**Confirmed Minutes of the 149th Meeting of
the Advisory Council on the Environment
held on 14 February 2008 at 2:30 pm**

Present:

Prof WONG Yuk-shan, BBS, JP (Acting Chairman)
Dr Dorothy CHAN, BBS
Mr James GRAHAM
Ms Betty HO
Prof Howard HUANG
Prof Paul LAM
Dr NG Cho-nam, BBS
Dr MAN Chi-sum, JP
Mr Markus SHAW
Mr TSANG Kam-lam
Mr Simon WONG
Dr YAU Wing-kwong
Mr Carlson K S CHAN (Secretary)

Absent with Apologies:

Prof LAM Kin-che, SBS, JP (Chairman)
Mr Edwin LAU
Ms Goretti LAU
Prof POON Chi-sun
Mr Eddie WONG
Prof WONG Tze-wai

In Attendance:

Ms Anissa WONG, JP	Permanent Secretary for the Environment
Mr C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department
Mr P Y TAM	Assistant Director/Technical Services, Planning Department
Ms Queenie CHAN	Acting Principal Information Officer, Environmental Protection Department (EPD)
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Mr KWAN Chung-kit	Office Manager (CBD), EPD
Ms Loletta LAU	Executive Officer (CBD), EPD

In Attendance for Agenda Item 3:

Mr Elvis AU, JP	Principal Assistant Secretary (Energy)2, Environment Bureau
Miss Joceline CHUI	Assistant Secretary (Energy)3, Environment Bureau
Mr Alfred SIT	Assistant Director/Energy Efficiency, Electrical and Mechanical Services Department (EMSD)
Mr S K HO	Chief Engineer/Energy Efficiency B, EMSD
Mr MAK Ka-Chun	Senior Engineer/Energy Efficiency B2, EMSD

In Attendance for Agenda Item 4:

Mr Maurice YEUNG	Principal Environmental Protection Officer (Assessment and Noise), EPD
Dr AU Hom	Senior Environmental Protection Officer (Assessment and Noise)1, EPD

In Attendance for Agenda Item 5:

Mrs Shirley LEE	Acting Assistant Director (Environmental Assessment), EPD
Mr Victor YEUNG	Senior Environmental Protection Officer (Metro Assessment)3, EPD

Action

The Acting Chairman informed Members that the Chairman would not be able to attend the meeting and he would chair the meeting as the Acting Chairman.

Agenda Item 1 : Confirmation of the draft minutes of the 148th meeting held on 14 January 2008

2. The draft minutes were confirmed without amendments.

Agenda Item 2 : Matters arising from the minutes of the 148th meeting held on 14 January 2008

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

Agenda Item 3 : Mandatory implementation of the Building Energy Codes
(ACE Paper 5/2008)

4. Mr Elvis Au briefed Members on the proposed mandatory scheme of the Building Energy Codes (BECs). He highlighted that Hong Kong, being a commercial city, had greater potential to improve energy efficiency and reduce greenhouse gas emissions by promoting energy efficiency in buildings. The Government launched on 28 December 2007 a three-month public consultation on the proposal for mandatory implementation of the BECs in certain new and existing buildings, with the aim of improving energy efficiency of buildings, alleviating global warming and combating air pollution.

5. A Member asked whether historical or heritage buildings would be covered by the proposed scheme. Mr Elvis Au said that it would depend on the use of the buildings. For existing buildings, the proposed scheme covered all major retrofitting works, such as replacement of major components of the installations covered by the BECs or retrofitting works involving more than 50% of the gross floor area, in commercial buildings and communal areas of residential and industrial buildings. Special considerations would be given to historical or heritage buildings in order to preserve the heritage value and special features with reference to overseas practices.

6. A Member considered that quite a number of historical or heritage buildings were converted from residential to commercial use based on the principle of adaptive reuse. She suggested that specific exemptions be included in the legislation for such buildings for consideration on a case-by-case basis. Mr Elvis Au assured Members that special considerations would be given to such buildings in line with international practices.

7. Ms Anissa Wong informed Members that under the provisions of the Antiquities and Monuments Ordinance, prior approval of the authority was required for any work to be performed on declared monuments which would affect the heritage value of the structure. In the context of compliance of the BECs, proper balance would be struck between the achievement of energy efficiency and preservation of heritage value of the structure.

8. A Member supported the proposed scheme. He asked whether institutional buildings such as universities, town halls or arts performing centres, would be covered by the scheme. Mr Elvis Au said that if the buildings were

used as offices, they would be covered by the scheme under commercial use. In determining the suitability of institutional buildings to be covered under the scheme, considerations would be given to international practices and specific operational requirements of the intended use of the building. It was observed that institutional buildings for educational purpose, such as universities and schools, should have no major difficulties to comply with the BECs due to the relatively standardized requirements and facilities. About 360 universities and schools had participated in the voluntary Hong Kong Energy Efficiency Registration Scheme for Buildings over the past 10 years. Consideration would be given to cover institutional buildings for educational purpose under the mandatory scheme.

9. A Member referred to a submission made on the proposal which expressed reservations on the effectiveness of the mandatory scheme. He considered that the proposed scheme was not forceful and rigorous enough. The key to success of the scheme was to ensure that new buildings as well as existing buildings would be built or retrofitted to a high energy efficiency standard for sustainable development. However, the proposed scheme mainly focused on new buildings. Existing buildings were covered only when major retrofitting works were performed. It would take an unduly long time for all buildings in the territory to comply with the BECs. It was important that all existing buildings should be covered by the scheme after a reasonable transition period. The energy performance of the buildings should be made known to potential occupants for them to make an informed choice. Appropriate requirements should be included to enable immediate actions to be taken on poorly built or poorly performed buildings in terms of energy efficiency.

10. Mr Elvis Au agreed that existing buildings should be covered under the scheme. Nonetheless, the application of mandatory BECs to existing buildings would require careful consideration. The Administration had attempted to set out a threshold for compliance of the BECs in existing buildings. First, all major retrofitting works, such as replacement of major components of the installations covered by the BECs or retrofitting works involving more than 50% of the gross floor area, in commercial buildings and communal areas of residential and industrial buildings should comply with the BECs. Second, energy audits had to be conducted once every 10 years for commercial buildings with a cumulative floor area over 500 m². The audit results would be made available to occupants or potential occupants. This would allow continuous improvement of energy efficiency of the buildings. It

was estimated that about 8,000 existing commercial buildings would be required to conduct energy audits. Third, the requirement for renewal of the Certificate of Compliance every 10 years for new buildings would maintain continuous assessment of energy performance. Finally, the BECs would be updated at a five-year interval for continuous updating and improvement of the standards. Through such a continuous reviewing scheme, the energy efficiency performance of existing buildings would be gradually improved. Moreover, the existing voluntary scheme would continue to be implemented and a tiered system would be introduced for buildings which had exceeded the minimum building energy efficiency standards. It was hoped that the mandatory scheme together with voluntary efforts would enable the community to move forward in terms of building energy efficiency progressively.

11. Mr Alfred Sit added that the normal life expectancy of major engineering installations in buildings was about 15 to 20 years which meant that the energy performance of buildings would be improved progressively when these aging installations were replaced gradually.

12. A Member considered the BEC scheme a very important environmental initiative. The result of a recent study conducted by the World Wild Fund for Nature (Hong Kong) on 25 ways of saving energy showed that building energy efficiency ranked the fourth. The findings of a recent published consultancy study also revealed that reduction in greenhouse gas emissions could be achieved at a net profit to the global economy. Thus, the scheme should be rigorous enough to achieve more effective results. He agreed with the other Member that all existing buildings should be covered under the mandatory scheme. For new buildings, he considered that an energy audit should be conducted one year after completion of the new building as a baseline assessment and at five-year intervals afterwards. He also suggested the granting of financial incentives for buildings which exceeded the minimum standard.

13. Mr Elvis Au explained that the duration of conducting an energy audit had to take into account a number of factors, including the large number of buildings involved, the availability of recognized professionals in the market, the lead time required for realizing energy performance of installations, and financial burden to occupants. There were divergent views on the frequency of energy audits. It was necessary to strike a balance between the need for exercising control and actual gain of the audits. In view of the large number of

buildings involved and the demand in workforce to cope with the audit works, a phased approach based on the age of existing buildings would be adopted.

14. Mr Elvis Au further explained that new buildings were subject to two stages of self-declaration. First, developers had to submit a self-declaration upon the approval of building plans by the Building Authority to ensure early attention to suitable design provisions. Then, developers had to submit a self-declaration no later than two months of the issue of occupation permits to demonstrate compliance with the energy efficiency standards. As an enforcement measure to ensure compliance, the Electrical and Mechanical Services Department (EMSD) would carry out sample checks of the completed installations on site.

15. Mr Alfred Sit added that considerations had been given to the cost-effectiveness of conducting more frequent audits. As the normal life expectancy of major engineering installations was between 15 and 20 years, there was not much gain in conducting an energy audit at a shorter interval against the current proposal of once in every 10 years.

16. In response to a Member's enquiry, Mr Elvis Au confirmed that the floor area of 500 m² for commercial buildings to be subject to energy audits referred to gross floor area. For residential buildings with shops or units for commercial purpose on the ground floor, the parts used for commercial use would be covered by the proposed scheme. In view of the large number of buildings covered by the scheme, the Member considered that the 10-year interval of conducting EEAs would be appropriate. Moreover, she agreed with the other Member that all existing buildings should be included under the mandatory scheme after a transition period.

17. In response to a Member's enquiry, Mr Elvis Au said that it was estimated that there were about 1,000 recognized professionals available in the market, mainly in the private sector, with required qualifications such as in the electrical, mechanical and building services engineering fields for undertaking energy audits.

18. A Member enquired about the scope of energy audits. Mr Alfred Sit explained that an energy audit mainly included two parts. The first part was on the stocktaking of energy consumption pattern of the building, such as measuring energy consumption by air-conditioning installations. The second

part was on identification of energy management improvement opportunities (EMO) which could be divided into three major categories, including EMOs requiring little or even no investment, such as house-keeping measures and minor fittings; EMOs requiring a small amount of financial resources, such as replacement of light fittings; and EMOs requiring major installation improvements, such as replacement of air-conditioning chillers. A Member suggested that a simpler system could be adopted by imposing a certain standard of electricity consumption level for a certain floor area. Exceedance of the level would result in a certain kind of penalty. This would be easier to enforce and save financial and human resources.

19. A Member suggested that the types and models of installations to be used in a building could be included in energy audits as some types or models of installations were much more energy efficient with less greenhouse gas emissions and had different degrees of ozone depletion potential, such as refrigerants in chillers.

20. A Member considered that the approach of energy audits was not a key concern. The key objective of the scheme should be the reduction of energy consumption for the improvement of air quality. There was an increasing demand on energy consumption in buildings due to changes in use and demand of occupants, such as the installation of a heater for supply of warm air in chilly weather. The Government should take more determined actions to introduce the mandatory scheme and other measures to reduce energy consumption in absolute terms. The target of reduction in terms of energy intensity was not so meaningful as the energy intensity of a building could be easily reduced by increasing the number of users. It would not help the reduction of absolute amount of air pollutants. The voluntary scheme had proved to be not effective. A more rigorous mandatory scheme would be necessary to achieve the objective.

21. A Member agreed that the prime objective of the proposed scheme was to combat air pollution and alleviate global warming. The Government could highlight that there had been proven cases that energy savings would reduce emission of air pollutants and also save money.

22. A Member noted that energy intensity had reduced by 13% over the 10-year period from 1995 to 2005 and the Government pledged to reduce energy intensity by at least 25% by 2030 (with 2005 as the base year). He

considered that the pledge was not ambitious enough. Moreover, targets in terms of overall energy consumption by a certain period should be set.

23. A Member agreed that it was not difficult to achieve reduction in terms of energy intensity when the Gross Domestic Product (GDP) was on the increase. He suggested presenting a clearer picture of energy consumption by correlating the yearly change in GDP and corresponding change in energy use over the past 10 years. This would enable the assessment on whether the 13% reduction was attributed to the increase in GDP or actual reduction in energy use. Mr Alfred Sit said that a chart showing the correlation of GDP and energy use over the past 10 years was contained in a booklet on “Hong Kong Energy End-use Data” issued by EMSD in September 2007. Mr Elvis Au added that the proposed mandatory scheme was only part of the package to achieve energy savings and alleviate global warming.

(Post-meeting note: Members were informed of the website for accessing the publication on “Hong Kong Energy End-use Data” after the meeting.)

24. In reply to a Member’s enquiry about the penalty system, Mr Elvis Au said that views were being collected on the general direction and scope of coverage. After defining the key issues, considerations would be given to drawing up specific details of the penalty system and control mechanisms to achieve the results. He assured Members that a transparent mechanism would be put in place to achieve sufficient deterrent effect. A list of buildings being issued with Certificates of Compliance would be made available for public inspection.

25. In reply to a Member’s enquiry about the party subject to penalties, Mr Elvis Au said that it would depend on the nature of offence and the type of issues involved. For a new building at the design stage, it would be the responsibility of the developer to submit the initial and final self-declarations for obtaining the first Certificate of Compliance. When the building was occupied, the property owners or management property company would be responsible for seeking the renewal of Certificate of Compliance once every 10 years. The responsibilities of concerned parties and steps to be taken would be clearly spelt out.

26. In response to a Member’s enquiry, Mr Elvis Au clarified that the issue of an occupation permit for a new building was not conditional upon the

submission of the final self-declaration. The mandatory scheme would be introduced through an independent piece of legislation with its own penalty system.

27. A Member worried that the penalty would be shifted from the developer to the occupants as it was common in Hong Kong that the units in a building were sold out shortly after the issue of the occupation permit. There might be a possibility that the developer would not be able to submit the final self-declaration within two months after the issue of the occupation permit for obtaining the Certificate of Compliance. Mr Elvis Au explained that there would be provisions in the legislation to ensure that the developer would be responsible for obtaining the first Certificate of Compliance for a new building and be held liable to penalties if the developer failed to comply with the statutory requirements.

28. A Member considered that the chance of shifting the responsibility from the developer to occupants would be slim as the developer had to obtain the approval of the Building Authority for the building plans which had to incorporate requirements under the BECs at the early stage.

29. A Member referred to the figure on “Energy Consumption by Sector” on page 3 of the Consultation Paper and noted that energy consumption by the commercial sector accounted for 37% of the total consumption while that of residential sector accounted for only 19%. He agreed that the scheme should focus on commercial buildings. To reduce energy consumption by the transport sector, which accounted for 36%, he suggested that incentives to use smaller vehicles be provided.

30. A Member suggested imposing more stringent requirements on energy consumption, especially on the control of exterior lighting such as decorative neon lights and laser lightings which were increasingly popular.

31. A Member enquired about the implementation time schedule. Mr Elvis Au said that the plan was to submit the draft legislation within the legislative year 2009-2010. In view of the overwhelming public support and urge for early implementation of the scheme, efforts were being made to expedite actions. In parallel, publicity campaigns were being launched to raise the public’s awareness of reducing energy consumption.

32. The Acting Chairman summarized Members' views as follows –
- (a) the Council was supportive of the proposal which aimed at improving energy efficiency of buildings, alleviating global warming and combating air pollution;
 - (b) the Council considered that the Government should be more proactive in implementing a more rigorous mandatory scheme of BECs in order to achieve more effective results in reducing energy consumption; and
 - (c) the Council suggested that existing buildings be included in the scope of the mandatory scheme by phases and all existing buildings should be covered by the scheme in the long run to achieve greater energy efficiency.

Agenda Item 4 : Proposed additional “Designated Areas” under the Noise Control Ordinance (Cap. 400)
(ACE Paper 6/2008)

33. Mr Maurice Yeung briefed Members on the proposal to establish newly identified areas in the territory as “Designated Areas” (DAs) under the Noise Control Ordinance (NCO) (Cap. 400).

34. In reply to a Member's enquiry, Mr Maurice Yeung explained that under the NCO, a Construction Noise Permit (CNP) from the Noise Control Authority was required for general construction work using powered mechanical equipment (PME) to be carried out during the restricted hours, i.e. between 7 pm and 7 am, or at any time on a general holiday (including Sundays). If an applicant for CNP proposed to carry out within the DAs any “prescribed activities” (such as hammering, erection or dismantling of formwork or scaffolding) or use “specified PME” (such as handheld breaker, bulldozer, handheld vibrating poker, dump truck and concrete lorry mixer), the Noise Control Authority would apply more stringent criteria when assessing the applications. The applicants would have to use effective mitigation measures, such as putting up noise barriers or enclosures, in order to meet the stipulated noise limit applicable to DAs.

35. A Member said that some of the specified PME were not the

state-of-art equipment for construction and were not used in many overseas countries. He suggested that more advanced types of quiet PME be required in order to minimize noise at source. Mr Maurice Yeung said that they had been actively exploring advanced quiet PME by keeping in pace with the development in technology. A quiet PME scheme had been introduced to recognize and give credits to quiet PME when assessing the CNP applications. A review had also been conducted in exploring the possibility of using alternatives and quiet PME for certain construction works. An example was the hydraulic crusher which was widely used for demolition works. Continued efforts would be made to identify quiet PME and alternatives to further improve construction noise problem.

36. A Member enquired about the control of piling works within DAs. Dr Au Hom explained that under the NCO, construction activities were grouped into two categories, i.e. percussive piling and general construction work. The carrying out of percussive piling was prohibited between 7 pm to 7 am and on holidays unless specifically exempted. Percussive piling during 7 am to 7 pm on weekdays might only be carried out in accordance with a CNP. For general construction work, the use of PME during restricted hours was prohibited unless a valid CNP was in force. The use of specified PME and/or the carrying out of prescribed construction activities in DAs was subject to more stringent control.

37. A Member welcomed the proposal which he considered a complementary programme to the Environmental Impact Assessment (EIA) Ordinance in exercising control on the noise impacts of projects not covered under the EIA Ordinance. In reply to the Member's enquiry about the coverage of the NCO, Mr Maurice Yeung explained that the basic principle of the NCO was to protect noise sensitive receivers, such as domestic premises and schools. Wildlife or birds were not categorized as noise sensitive receivers. Designation of DAs was not based on the draft outline zoning plans. DAs referred to populated built-up areas which were vulnerable to noise disturbance. The focus was mainly on the newly developed or actively developing areas with residential development. Under the current proposal, newly identified DAs included areas like the newly developed areas of Manhattan Hill and Hoi Lai Estate in Lai Chi Kok. The zoned "comprehensive development areas" under the draft outline zoning plans would not be automatically designated as DAs in the current exercise.

38. The Acting Chairman concluded that the Council was supportive

of the proposal to establish newly identified areas in the territory as DAs under the NCO which was expected to benefit more than 280,000 residents. The Council was also pleased to note the plan of implementing the proposal within a short timeframe by tabling the proposal at the Legislative Council in May 2008 and starting the implementation in early 2009.

Agenda Item 5 : Report on the 101st Environmental Impact Assessment Subcommittee Meeting

(ACE Paper 7/2008)

39. A Member declared interest as her company was engaged as a public engagement consultant for the project of Wan Chai Development Phase II and Central-Wan Chai Bypass under consideration. She has abstained from the EIA Subcommittee meeting. In view of the personal and direct interest in the project, the Acting Chairman agreed that she should abstain from the meeting.

(The Member left the meeting at this juncture.)

40. The Chairman of EIA Subcommittee reported the recommendations of the Subcommittee on the EIA report on “Wan Chai Development Phase II and Central-Wan Chai Bypass”.

41. The meeting agreed that the Council should endorse the EIA report with the conditions as proposed in paragraph 40 of the paper.

Agenda Item 6 : Any other business

Tentative items for discussion at the next meeting

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

Agenda Item 7 : Date of next meeting

43. The next meeting was scheduled for 10 March 2008.

**ACE Secretariat
February 2008**