Confirmed Minutes of the 162nd Meeting of the Advisory Council on the Environment held on 6 July 2009 at 2:30 pm

Present:

Prof LAM Kin-che, SBS, JP (Chairman)
Prof Paul LAM, JP (Deputy Chairman)
Ms Teresa AU
Prof CHAU Kwai-cheong
Mr Edwin LAU, MH
Prof Joseph LEE
Mr Michael LEE
Dr MAN Chi-sum, JP
Mr Simon WONG, JP
Dr YAU Wing-kwong
Prof Ignatius YU
Mr Carlson K S CHAN (Secretary)

Absent with Apologies:

Dr Dorothy CHAN, BBS
Mr Oscar CHOW
Ms Betty HO
Mr Michael JEBSEN, BBS
Dr Alfred TAM
Mr TSANG Kam-lam
Prof WONG Ming-hung

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 Monica KO	Principal Information Officer, Environmental Protection Department (EPD)
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Ms Loletta LAU	Executive Officer (CBD), EPD

In Attendance for Agenda Item 3

Miss Katharine CHOI	Principal Assistant Secretary for the Environment (Energy), Environment Bureau (ENB)
Mr Christopher LAU	Assistant Secretary for the Environment (Energy)2, ENB
Mr K K LI	Acting Assistant Director/Energy Efficiency, Electrical and Mechanical Services Department (EMSD)
Mr VY Ek-chin	Acting Chief Engineer/Energy Efficiency A, EMSD
Mr WONG Lap-chi	Senior Engineer/Energy Efficiency A4, EMSD

In Attendance for Agenda Item 4

Mr Sam WONG	Acting Assistant Director (Environmental Assessment), EPD

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Agenda Item 1 : Confirmation of the draft minutes of the 161st meeting held on 8 June 2009

The draft minutes were confirmed without amendment.

Agenda Item 2 : Matters arising from the minutes of the 161st meeting held on 8 June 2009

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

Agenda Item 3 : Proposed second phase of the Mandatory Energy Efficiency Labelling Scheme
(ACE Paper 10/2009)

3. Miss Katharine Choi briefed Members on the updates of the initial phase of Mandatory Energy Efficiency Labelling Scheme (MEELS) and details of the proposed second phase of MEELS. The Energy Efficiency (Labelling of Products) Ordinance was enacted on 9 May 2008, with a grace period of 18 months. There were three prescribed products covered under the initial phase of the scheme, namely, room air conditioners, refrigerating appliances and compact fluorescent lamps (CFLs). The second phase of MEELS aimed to

include two more products, namely, washing machines and dehumidifiers. The plan was to submit the relevant legislative amendments to the Legislative Council by end 2009.

4. The Chairman enquired about the environmental benefits brought about by the proposed scheme in terms of total emission of carbon dioxide (CO_2) in Hong Kong. Miss Katharine Choi said that it was estimated that an annual reduction of CO_2 emission of 17,500 tonnes would be achieved by the proposed scheme and the total annual emission of CO_2 in Hong Kong was about 46 million tonnes.

5. In response to the Chairman's enquiry, Miss Katharine Choi confirmed that the five prescribed electrical appliances under the initial and second phases of MEELS accounted for about 67% of annual electricity consumption in the residential sector. The electricity consumption of residential sector accounted for about 25% of the total electricity consumption among all sectors in Hong Kong.

6. A Member enquired about the experience learnt from the initial phase of MEELS. Miss Katharine Choi said that there was not much difficulty in processing the product information submissions under the initial phase. During the public consultation, there were concerns from local manufacturers and importers on some issues, such as duration of the grace period for switching the products from the Voluntary Energy Efficiency Labelling Scheme (VEELS) to MEELS, exemptions to be granted for products with low sales volume, and the availability of recognized international test standards. All these concerns had been taken into account when formulating the initial phase of MEELS.

7. A Member enquired whether the "two-in-one" type of washing machines with dryers would be covered under the scheme. Miss Katharine Choi said that this type of washing machines would be covered and only the washing functions of the machine would be assessed. In reply to the Chairman's enquiry, Miss Choi said that clothes dryers were covered under VEELS but so far no model had been registered under VEELS. This type of product accounted for roughly only 0.8% of local residential energy consumption and the anticipated potential energy saving was low. Mr K K Li supplemented that some countries, such as Australia, Canada and Singapore, included clothes dryers under their mandatory schemes. The Administration

would keep in view the international development.

8. In reply to a Member's enquiry about gas clothes dryers, Miss Katharine Choi said that gas clothes dryers were not covered under VEELS. For the implementation of MEELS, priority would be given to products which were covered under VEELS. The Administration would keep in view the usage of such type of products for inclusion under VEELS.

9. A Member asked whether heavy-duty washing machines were regarded as products for residential sector. Mr Vy Ek-chin explained that only washing machines with capacity not exceeding 7 kg were covered under the second phase of MEELS. The Chairman enquired about the rationale of not extending the mandatory scheme to industrial-use washing machines. Mr K K Li explained that for more heavy-duty washing machines or products, the purchasers would usually seek expert advices in coming up with product specifications, including energy performance of the products. At the current stage, efforts would be focused on the residential sector as the general public might not have adequate knowledge and information on energy performance of the products.

10. A Member asked whether the scheme covered non-electrical products and whether there was information on the comparison of energy performance of electrical and gas appliances of the same type, such as cooking stoves and water heaters. Miss Katharine Choi said that VEELS covered some non-electrical products but MEELS currently only covered electrical products. A number of electrical and gas appliances was covered under VEELS, such as domestic gas instantaneous water heaters, electric storage water heaters, electric rice cookers and hot/cold bottle water dispensers. These products were not yet switched to MEELS for various reasons, such as unavailability of international standards, low potential for energy saving and low penetration rate of the voluntary scheme.

11. A Member considered that one of the major concerns of consumers in making the choice between an electrical and gas product of the same type was the amount of CO_2 emissions to be generated. Moreover, there was increasing variety of electrical and gas products available in the market. Mr K K Li said that in general the efficiency conversion of electric water heaters was over 99% while that of gas water heaters was about 70 to 80% regardless of

other factors.

12. A Member enquired about the means by which energy labels could help consumers in making their choice between gas and electric water heaters. Mr K K Li said that it was difficult to compare the merits and demerits of gas and electric water heaters. The initial capital cost between gas and electric water heaters was quite substantial. The installation of gas or electric water heaters in new residential developments would depend very much on the decision of developers. The power companies might offer electrical riser cables so that future tenants could use three-phase electricity supply. They could then choose to install electric instantaneous water heaters. If the electricity supply could not cope with the demand, future tenants had to pay for the upgrading cost if they want to install electric instantaneous water heaters. Otherwise, they would have to install storage-type electric heaters with a big cylinder which was getting less popular in the market. For the installation of gas instantaneous water heaters, an external flue for combustion must be provided in accordance with the legislative requirements which would impose constraints to architects and developers. Moreover, the tariff pattern of electricity and gas was very different.

13. A Member suggested the Government conducting life-cycle analysis from fuel use to energy production and providing information on the comparison of energy generated by gas and electricity in terms of greenhouse emissions for common household activities, such as boiling a kettle of water by a gas stove and an electric stove. This information would be useful for public education and facilitate consumers in making choice for environmental benefits.

14. A Member enquired about the durability of products in relation to the grading of labels, such as CFLs. Mr Vy Ek-chin explained that the lifespan of CFLs was one of the elements in assessing the energy efficiency grading of labels. The lifespan of CFLs with Grade 1 and Grade 2 labels was more than 8,000 hours of operation and that of CFLs with Grade 3 and Grade 4 labels was more than 6,000 hours of operation. CFLs with lifespan of less than 6,000 hours of operation would be ranked Grade 5 irrespective of the energy performance. For other products such as room air conditioners and refrigerating appliances, it was not common to include lifespan in the assessment. Mr K K Li added that it was difficult to define the lifespan of a product as it depended on a number of factors. The actual performance of a

product might be different from the performance in laboratory setting. For example, the lifespan of CFLs depended also on the ambient temperature.

15. A Member welcomed the proposed scheme. He asked whether the performance of CFLs over time was included in the assessment. While a CFL had a lifespan of about 8,000 hours, it might have to be discarded prematurely if it became dim after operating for a short period and thus defeated the purpose of energy saving. Mr Vy Ek-chin explained that they had adopted the International Electrotechnical Commission (IEC) standard for assessing the performance of CFLs. The IEC standard had taken into account lumen maintenance (i.e. lumen output when the light had been in operation for 2,000 hours). Under the MEELS, CFLs with Grade 1 and Grade 2 labels should have lumen maintenance of over 80% and CFLs with Grade 3 and Grade 4 labels should have lumen maintenance of over 78%. Those with lumen maintenance of below 78% would be ranked Grade 5.

16. A Member noted the recent development of CFLs being phased out by LED (light emitting diode) products and asked whether the MEELS could catch up with the development. Mr Vy Ek-chin said that they noted that some overseas countries were working on the assessment standards and testing requirements of LED. They would monitor the development closely. They had also carried out tests on some LED products in the market and would assess the energy performance of these products.

17. A Member suggested extending the mandatory scheme to more types of commonly used electrical appliances such as dryers, television sets and personal computers to achieve more effective results. Miss Katharine Choi explained that a number of factors had to be taken into account on the coverage of the scheme, including potential for energy saving having regard to compliance costs for manufacturers and importers, product model life and availability of accredited laboratories. For television sets, the estimated potential energy saving was very low as the standard adopted for measuring energy efficiency was in stand-by mode. While Australia and the United States recently started to measure the energy efficiency of television sets in active mode, it would take time to study the effectiveness of the new measuring standards. They would keep in view the latest development before considering the extension of the scheme to television sets. For personal computers, they were regarded as office equipment covered under VEELS. So far, office

equipment was not covered under the mandatory scheme in most other countries. Moreover, the compliance costs of personal computers would be relatively high having regard to the short product model life.

18. In reply to a Member's enquiry about tests conducted by overseas laboratories, Miss Katharine Choi said that test reports conducted in accordance with the standards and issued by laboratories accredited by the Hong Kong Accreditation Service (HKAS) under the Hong Kong Laboratory Accreditation Scheme, or a scheme with which HKAS has entered into a mutual recognition agreement would be accepted.

19. Some Members urged the Administration to extend the coverage of the MEELS to other products at a faster pace. They suggested setting a time-table on the plan for extending MEELS to more types of commonly used products. This would show the Government's commitment and would also be beneficial for public education and changing purchasing habits for environmental benefits. A Member considered that the Government should step up efforts in the legislative amendment process and take the initiative to require the trade to introduce more products with higher energy efficiency as the trade was usually more reluctant to do so.

20. Miss Katharine Choi explained that VEELS covered 19 types of products currently and the scheme was expanding over the years. Five products with the highest electricity consumption had been or would be switched from VEELS to MEELS under the two phases. They were liaising with the trade closely for expansion of VEELS and identifying more products for switching from VEELS to MEELS when the time matures. They would continue the effort in liaising with the trade for promoting the import of more energy efficient products. Mr K K Li added that in most developed countries, the number of products covered under their MEELS was not large due to various reasons such as cost effectiveness and market penetration, e.g. only five products covered under the mandatory scheme in Australia.

21. A Member considered that the community should not only rely on the Government in pushing forward the MEELS. The market force should be an important drive in motivating manufacturers and importers to introduce products with higher energy efficiency targeted at electricity tariff as well as emissions reduction. He was more concerned about the evaluation of

effectiveness of MEELS, such as the means to keep track of the products.

22. A Member asked whether the energy performance of Grade 1 products in Hong Kong would be similar to that of Grade 1 products in overseas countries. Miss Katharine Choi said that the grading of products in Hong Kong was based on models available in the local market. There was no information on the performance of different models in different overseas markets.

23. A Member enquired about the distribution of products in the market among different grades under the labelling scheme. Miss Katharine Choi said that the current distribution of washing machines among the five grades under VEELS was that over 40% ranked Grade 1, about 40% ranked Grade 2, and more that 10% ranked Grade 3 to Grade 5. For dehumidifiers under VEELS, 15% ranked Grade 1, over 40% ranked Grade 2, more than 40% ranked Grade 3 to Grade 5. Under the first phase of MEELS, room air conditioners with Grade 5 energy labels were not found in the market. It was expected that products of low energy efficiency would be driven out by market force.

24. A Member asked whether a norm criterion, rather than distribution by percentile, was adopted in the grading system. Miss Katharine Choi explained that the grading system at the beginning of implementing VEELS was generally based on distribution by percentile. With the introduction of new models and phasing out of old models, the distribution gradually changed as the ranking of the products was based on some standards. Mr K K Li said that the grading levels of washing machines and dehumidifiers under VEELS would be adopted for MEELS to ensure a smooth transition. The grading system would be reviewed in future having regard to technological development and availability of models in the market.

25. A Member asked whether the grace period of 18 months could be shortened to 12 months. Mr K K Li explained that the duration of the grace period, which was adopted in the initial phase, had taken into account views of relevant trade. For example, room air conditioner was a seasonal product and sufficient time had to be given to the trade in selling stocked-up products and switching from the voluntary to mandatory scheme. Dehumidifier under the second phase was also a seasonal product. The 18-month grace period was

considered necessary.

26. In reply to the Chairman's enquiry on the exemption stated in paragraph 12(b) of the paper, Miss Katharine Choi said that the procurement contract referred to the procurement contract irrespective of the volume of products. Developers might enter into several procurement contracts when developing a single housing development, the authority would examine each procurement contract to assess whether it would fall under the exemption clause.

27. A Member considered that the key for achieving energy saving was to make sure that the public would choose products which were labeled energy efficient. If the cost of energy efficient products was high, it might deter customers from buying them. He suggested imposing a minimum level of energy performance for certain products in order to ensure the achievement of a certain level of energy saving. Miss Katharine Choi explained that according to market surveys, the grading of energy label was not a major factor for the cost of a product. It was noted that some countries, such as Korea and Canada, had implemented a minimum energy performance standard. Nonetheless, with the implementation of MEELS in Hong Kong, it was expected that products with low energy efficiency performance would be phased out by market force.

28. The Chairman summarized Members' views as follows –

(a) the Council fully supported the proposed second phase of the MEELS;

(b) the Council considered that public education was very important as the effectiveness of the scheme in reducing greenhouse gas emissions would depend very much on the consumers' choice. Information and publicity should be focused on the following areas –

(i) to highlight that the benefits of choosing high energy efficient products was not only saving energy but also saving money and saving the earth;

(ii) to provide information on top of individual product or model, such as tips to save energy by using the products;

(iii) to provide information on the distribution of products among the energy gradings to facilitate consumers in making their choice;

(c) the Council suggested MEELS being rolled out at a faster pace and be extended to a wider scope of products for different sectors, including the institutional, industrial and commercial sectors. A clean environment would count on every small contribution from various sources and sectors; and

(d) the Council suggested an evaluation program be implemented to assess the effectiveness of the scheme in achieving energy saving.

Agenda Item 4 : Report on the 108th Environmental Impact Assessment Subcommittee meeting
(ACE Paper 11/2009)

29. The Chairman informed Members that the paper reported on the recommendation of the Environmental Impact Assessment (EIA) Subcommittee on the EIA report on "Hong Kong Offshore Wind Farm in Southeastern Waters" (Wind Farm).

30. A Member declared that he was a member of the CLP Power Hong Kong Ltd. (CLP) Education Fund Advisory Committee. A Member declared that he was a member of the CLP Power Customer Consultative Group. The meeting agreed that they could stay and continue to take part in the discussion in view of the indirect relationship with the project under consideration.

31. The Chairman informed Members that the public inspection period of the EIA report was from 3 June to 2 July 2009. Comments received by the Environmental Protection Department (EPD) before the EIA Subcommittee meeting had been circulated to Subcommittee Members for reference. Public comments received by the EPD after the Subcommittee meeting had been circulated to all Council Members for reference before the full Council meeting.

32. The Chairman informed Members that the response of the project proponent to a Member's questions and comments regarding the viability of the project in areas subject to tropical cyclones and cost-effectiveness of the project had been circulated to Members for information before the meeting. Separately, a submission related to the EIA report from the World Wide Fund for Nature (Hong Kong) (WWF(HK)) addressed directly to the Council was referred by a Member (who could not attend the meeting) shortly before the meeting. The submission was circulated to Members for information before the meeting and tabled for Members' easy reference.

33. The Chairman suggested and Members agreed that in considering EIA reports for which the Subcommittee had decided that the project proponents would not need to attend the full Council meeting, further queries and written submissions on the EIA report from Members after the Subcommittee meeting should be passed to the secretariat at least four working days before the full Council meeting in order to allow sufficient time for the project proponent to respond in writing.

34. The Chairman of EIA Subcommittee reported on the recommendation of the Subcommittee on the EIA report.

35. A Member enquired about the potential risk of earthquake in the project site. The Chairman of EIA Subcommittee said that some EIA Subcommittee Members had raised a question before the Subcommittee meeting about volcanic crater in the site. The project proponent confirmed in writing that the proposed construction methodology of the wind turbine foundations using suction caisson would not intrude into the rock layer of the seabed. No foundation would risk touching the underlying bedrock. Prior to the construction, detailed geophysical investigations (seismic and magnetic surveys) would be carried out and every foundation would be custom-made depending on the silt layer thickness.

36. A Member said that the issue of bird surveys was raised at the Subcommittee meeting and he noted a similar concern in WWF(HK)'s submission on the flight line of terns and night surveys. The Chairman of EIA Subcommittee said that the issue of avifauna was discussed at the Subcommittee meeting. The project proponent confirmed that findings of the EIA showed that birds were sparsely populated in the study area. Amongst the species

identified, they were mainly active in the day time and there were no migratory routes. Mr C C Lay said that white-bellied sea eagle (WBSE) was one of the target species under the survey programme of the Agriculture, Fisheries and Conservation Department (AFCD) since 2002. Over the years, about 17 sites were spotted as the breeding grounds of WBSE. In the 2008/09 surveys, the breeding site nearest to the project site was Steep Island which was over 8 km away from the project site. He noted that the boat survey for the EIA was conducted by an expert in the field. In the survey, no WBSE was recorded in the study area and within the 2 km buffer area. The findings were consistent with AFCD's survey programme. As for terns, the Hong Kong Bird Watching Society had conducted surveys on this type of bird at the Mirs Bay, particularly in Shek Ngau Chau area. The number of terns reported ranged from 250 to 670 in the past few years. AFCD also conducted surveys on terns in the past few years and recorded terns on a few other islands but the numbers were significantly less than that reported in Mirs Bay. For instance, the number of terns recorded in Ninepin Group was about 30 to 50 individuals in the 2008 survey. The birds were found foraging mainly within the near shore area of about 1 to 2 km. The findings of the EIA study were consistent with the survey results. The bird usage in this area was very low and the bird activity was dominant in day time. It was considered that the use of radar for night survey would not be effective to detect the birds' activity at night time. AFCD considered that survey methodologies adopted by the project proponent met the requirements in the Technical Memorandum on EIA Process.

37. The Chairman noted the suggestion of conducting supplementary fisheries surveys in the WWF(HK)'s submission. Mr C C Lay said that in vetting the EIA report, AFCD noted that the studies used information from the latest Port Survey conducted by AFCD in 2006 and conducted interviews with local fishermen. Marine radar data analysis of fishing vessel activities and boat-based surveys were also included to supplement the studies. In view of the ample information which the project proponent based on, AFCD considered that supplementary fisheries surveys to cover the whole year were not necessary. The Chairman of EIA Subcommittee pointed out that the EIA findings showed that the site was mainly silty mud bed with low ecological value. As experience showed that turbine foundations could serve as artificial reef substrate, the Subcommittee recommended a condition on fisheries enhancement plan.

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38. A Member pointed out that the impact of the project on the proposed geopark in Sai Kung area (Geopark) was also a concern of Members. The Chairman of EIA Subcommittee said that the landscape and visual impacts of the project on the Geopark was discussed in length at the Subcommittee meeting. The issue of visual impacts was more a perception and judgement on how to perceive the co-existence of the wind farm and Geopark. To minimize the potential impacts, the Subcommittee proposed a condition requiring the project proponent to minimize the footprint of the wind farm and maximize the distance of the turbines from Ninepin Group and Ung Kong Group. A Member said that some people would not like the artificial turbine structures in the natural scenery but some would perceive it as a landmark of clean energy and an opportunity for eco-tourism. It would be necessary to strike a balance between these views. A Member said that the views within the green groups were also divided. The Subcommittee considered that it was necessary to consider the environmental impacts of the project within the EIA framework.

39. Ms Anissa Wong said that landscape and visual impacts of the project, including possible impacts of navigation lighting of turbines, had been carefully assessed by the Planning Department, which was the authority in advising on these aspects under the EIA Ordinance. There was no precedent locally on the nomination of Geopark under the national jurisdiction and listing under the United Nations Educational, Scientific and Cultural Organization (UNESCO). The regime for nomination of the Geopark in the national and international level was separate from the EIA framework and thus it would not be appropriate to bring in the consideration of nominating the Geopark into the legal framework of the EIA Ordinance. In respect of the target of meeting 2% of Hong Kong's total electricity supply by renewable energy by 2012, the development of the Integrated Waste Management Facilities would help achieve the target.

40. A Member supported the wind farm project but was worried about the outcome of the application of Geopark to be listed under the UNESCO. He learnt that in considering the designation of world heritage sites, the World Heritage Committee of UNESCO would not tolerate obtrusive objects within reasonable distance of the site.

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41. A Member referred to paragraph 21 of Annex B of the paper and noted the project proponent's advice that the biggest offshore wind farm was a project with an output of 630 MW of electricity. He wondered whether this project or any other large-scale offshore wind farm was located in the subtropical climate and near urban waters similar to the proposed project in Hong Kong.

(Post-meeting note: The project proponent advised that the offshore wind farm project with an output of 630 MW of electricity was the London Array Wind Farm under construction which was located about 20 km from an urban area. An example of offshore wind farm in operation was the Lynn and Inner Dowsing Wind Farm in the UK with an output of 194 MW which was located about 5 km from an urban area. In the subtropical area, there were almost 100 onshore wind farms in operation such as those in Guangdong, Taiwan and Fujian. There were also a number of planned large-scale offshore wind farms in Southern China and Taiwan.)

42. The meeting agreed that there was no need to add supplementary conditions on the EIA report. The Chairman concluded that the Council endorsed the EIA report with the conditions and recommendation set out in paragraphs 10 and 11 of the paper.

Agenda Item 5 : Any other business

Modus Operandi of the EIA Subcommittee

43. The Chairman of the EIA Subcommittee briefed Members on the updating of the "Modus Operandi of the EIA Subcommittee", which was a set of administrative guidelines on the operation of the Subcommittee. The current Modus Operandi was issued in 2001 as an annex to ACE Paper 10/2001. As an established practice, the EPD would pass the Modus Operandi to the project proponents for information before they submitted EIA reports selected by the EIA Subcommittee and the Modus Operandi was also available in EPD's website. In view of the fact that the Modus Operandi had been in use for about eight years, the EIA Subcommittee had taken the opportunity at the meeting on 15 June 2009 to discuss the guidelines with a view to updating and reviewing it in light of experience gained over the years. The marked-up version with

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proposed amendments of the EIA Subcommittee had been passed to Members before the meeting. He highlighted the key proposed amendments.

44. The meeting endorsed the updated Modus Operandi of the EIA Subcommittee.

Tentative items for discussion at the next meeting

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

Agenda Item 6 : Date of next meeting

46. The Council agreed that no meeting would be held in August 2009. The next meeting was scheduled for 14 September 2009.

ACE Secretariat
August 2009