

**Confirmed Minutes of the 225th Meeting
of the Advisory Council on the Environment (ACE)
held on 3 July 2017 at 2:30 pm**

Present:

Mr Stanley WONG, SBS, JP (Chairman)
Prof Nora TAM, BBS, JP (Deputy Chairman)
Ir Cary CHAN, JP
Dr Billy HAU
Dr HUNG Wing-tat, MH
Prof LAU Chi-pang, JP
Dr Michael LAU
Prof Albert LEE
Mr Andrew LEE
Mr Anthony LOCK
Ir MA Lee-tak, SBS
Prof Jonathan WONG, MH, JP
Mr Luther WONG, JP
Mrs Alice CHEUNG, JP (Secretary)

Absent with Apologies:

Ms Julia LAU
Prof Kenneth LEUNG
Ir Prof Irene LO, JP
Prof John NG
Ir Michelle TANG
Dr Eric TSANG
Ir Conrad WONG, BBS, JP
Mr Simon WONG, JP
Prof WONG Sze-chun, BBS, JP

In Attendance:

Mr Donald TONG	Permanent Secretary for the Environment/Director of Environmental Protection
Ms Lily YAM	Assistant Director of Planning/Technical Services, Planning Department (PlanD)
Mr Simon CHAN	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Miss Heidi LIU	Principal Information Officer, Environmental Protection Department (EPD)

Ms Becky LAM

Miss Dora CHU

Miss Apple LEUNG

Chief Executive Officer (CBD), EPD

Executive Officer (CBD) 1, EPD

Executive Officer (CBD) 2, EPD

In Attendance for Item 3:

Mr Dave HO

Mr Brian LAU

Acting Assistant Director (Air Policy), EPD

Principal Environmental Protection Officer (Air Policy),
EPD

In Attendance for Item 4:

Mrs Dorothy MA

Principal Assistant Secretary for the Environment
(Energy), Environment Bureau (ENB)

Action

The Chairman informed Members that apologies of absence had been received from Mr Andrew Lee, Prof Kenneth Leung, Ir Prof Irene Lo, Prof John Ng, Ir Michelle Tang, Dr Eric Tsang, Mr Simon Wong, Ir Conrad Wong and Ms Julia Lau.

2. The Chairman, on behalf of the ACE, extended the heartiest congratulations to Ir Cary Chan and Ir Prof Irene Lo on being appointed as Justice of Peace.

Item 1 : Confirmation of the draft minutes of the 224th meeting held on 6 June 2017 (Closed-door session)

3. The draft minutes were confirmed without amendment. The Chairman thanked Prof Nora Tam for presiding the meeting during his absence.

Item 2 : Matters arising (Closed-door session)

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

Item 3 : Proposal to Mandate Vessels to Use Compliant Fuel within Hong Kong Waters

(ACE Paper 13/2017)

5. The Chairman informed Members that the paper sought Members' views

on the proposal to introduce a new regulation under the Air Pollution Control Ordinance (APCO) requiring vessels to use compliant fuel within Hong Kong waters starting from 1 January 2019 for improving air quality. The discussion would be divided into the Presentation cum Question-and-Answer Session and the Internal Discussion Session.

6. There was no declaration of interests by Members.

[The presentation team joined the meeting at this juncture.]

Presentation cum Question-and-Answer Session (Open session)

7. Mr Dave Ho introduced the background of the proposal for mandating the use of compliant fuel by vessels within Hong Kong waters (the Proposal). By way of a powerpoint presentation, Mr Brian Lau briefed Members on the details of the Proposal, environmental and cost implications, views collected during consultation and the legislative timetable.

The Proposal

8. Mr Dave Ho advised that the Proposal was one of the measures under the 2013 Clean Air Plan for broadly attaining the Air Quality Objectives (AQOs) by 2020. In reply to a Member's written questions raised before the meeting, Mr Ho advised that the Environment Bureau and the Ministry of Transport (MoT) signed a Cooperation Agreement on Prevention and Control of Air Pollution from Vessels in December 2016 to collaborate on the control of marine emissions and the setting up of a domestic emission control area (DECA) in the Pearl River Delta (PRD) region. As the PRD DECA did not cover Hong Kong waters, it was proposed that a new regulation under the Air Pollution Control Ordinance (APCO) be introduced such that vessels within Hong Kong waters would be subject to the same control as the DECA from 1 January 2019 onwards.

9. In reply to a Member's enquiry on the anticipated improvement in air quality arising from the Proposal, Mr Dave Ho advised that the proposed measure was also one of the key air quality improvement measures considered in the AQO review and that the improvement in air quality that could be brought about by the measures would be assessed in the review.

Reducing the emission of nitrogen oxides

10. In response to another written question raised by a Member regarding the emission of nitrogen oxides (NO_x) from marine vessels, Mr Dave Ho advised that mandating the use of compliant fuel could help reduce sulphur dioxide (SO₂) and particulates emissions from vessels considerably but the measure would have limited effect on NO_x emission which was highly dependent on the design of marine vessel engines. He said that the International Maritime Organization (IMO) had progressively tightened the emission standards for new vessels with a view to reducing NO_x emissions from vessels. The IMO required vessels constructed in or after January 2011 to comply with Tier II NO_x emission standard, which could reduce NO_x emissions by 20% compared with Tier I. It also required vessels constructed in or after January 2016 while operating in emission control areas (ECAs) established under the IMO to comply with Tier III NO_x emission standards. Vessels complying with Tier III standards would emit 75% less NO_x than their Tier II counterparts. There were however only four existing ECAs established under the IMO but none of them were within Asian waters.

Feasibility of further tightening the sulphur requirement

11. Considering that most of the local vessels (LVs) and river trade vessels were running on locally supplied marine light diesel (MLD) with a statutory sulphur limit of 0.05%, a Member opined that it was too lenient to require ocean-going vessels (OGVs) to use a fuel with sulphur content not exceeding 0.5% by weight.

12. Mr Dave Ho advised that currently the IMO set a global sulphur content limit of 3.5% for fuels used by OGVs. The Proposal to require OGVs plying Hong Kong waters to use compliant fuel with a sulphur limit at 0.5% would help substantially reduce their SO₂ and particulates emissions. In considering whether the fuel sulphur content limit could be further tightened, it was necessary to ensure the availability of fuel in the Asian region such that OGVs could obtain compliant fuel before entering Hong Kong waters. For the time being, fuels with sulphur content lower than 0.5% were still not widely available in Asian ports. He advised that MoT would review the implementation of the DECAs by end of 2019 to assess the feasibility of tightening the control measures, including whether or not to tighten the fuel sulphur requirement of the DECA to 0.1%.

13. A Member opined that MoT might likely decide to tighten the fuel sulphur requirement to 0.1% after the review in end 2019. Considering the time required for legislation amendment, he expressed concern that Hong Kong might lag behind the Mainland on tightening the fuel requirement. He asked whether it would be possible to include provisions in the new legislation to allow flexibility for the Government to impose stricter fuel sulphur limit. Mrs Alice Cheung advised that the new regulation would be a subsidiary legislation under the APCO and that any future amendment on the fuel sulphur limit would be subject to a negative vetting of the Legislative Council which could be completed within a relatively shorter period of time.

14. As OGVs would enter the PRD DECA before the Hong Kong waters and it was unlikely for OGVs to switch fuel a second time when entering the Hong Kong waters, a Member remarked that MoT's further tightening of the sulphur limit to 0.1% would benefit the PRD region as well as Hong Kong even if there was a delay in mandating the same sulphur limit in Hong Kong.

Enforcement

15. As OGVs were required to switch to use compliant fuel while at berth in Hong Kong since 1 July 2015, the Chairman asked about the enforcement actions as well as the number of non-compliance cases since the implementation of the legislation.

16. Mr Brian Lau said that EPD conducted surprise inspections to 200 OGVs and found four non-compliance cases. Prosecutions had been initiated and owners of the OGVs concerned were convicted and fined. He remarked that all concerned OGVs had in fact switched fuel while at berth, but the sulphur content exceeded the statutory limit owing to operational or technical errors.

17. The Chairman enquired whether the requirement for OGVs to keep a log book was sufficient to ensure compliance with the new regulation, and whether inspections would be conducted while the vessels were sailing.

18. Mr Brian Lau advised that based on the practice adopted in the United States and European countries that had established ECAs under the IMO, enforcement officers would only board a vessel for inspection while it was at berth. During inspections, records on the log book would be inspected and where necessary, fuel samples would be collected to confirm the fuel sulphur content.

Some European countries were conducting pilot studies on the feasibility to use remote sensing devices to detect the sulphur content of fuel used in a sailing vessel to help identify whether the vessel was using non-compliant fuel. EPD was collaborating with a local university to study the feasibility to use similar remote sensing devices in Hong Kong.

19. Mr Dave Ho supplemented that there would be a change in the fuel temperature when a vessel switched from bunker to low sulphur fuel. During inspections, enforcement officers would inspect the fuel temperature records and other relevant documents, e.g. bunker delivery notes, and, if necessary, to take fuel samples for analysis. A Member asked whether vessel operators could report fuel temperature records to the enforcement authorities once they entered Hong Kong waters so as to reduce the need for inspections. Mr Ho explained that while a change in fuel temperature could serve as an indication of the fuel switch operation, compliance with the fuel sulphur limit could only be ascertained by inspecting a vessel and collecting fuel samples for analysis.

Conclusion

20. The Chairman concluded that Members were generally supportive of the Proposal and thanked the representatives of EPD for their presentation.

[The presentation team left the meeting at this juncture.]

Internal Discussion Session (Closed-door session)

21. Mr Donald Tong advised Members that the Proposal would not relax restrictions for LVs as there was a statutory cap of 0.05% on the sulphur content of locally supplied MLD and LVs rarely left the Hong Kong waters. He said that as OGVs were not regulated in the Mainland and in Hong Kong currently, the establishment of the DECAs and the new regulation to mandate vessels to use compliant fuel in Hong Kong waters would be a significant step in helping to reduce air pollution from the marine sector. In formulating the Proposal, EPD had consulted the relevant marine trade. As OGVs must travel across the PRD DECA before entering Hong Kong waters, Mr Tong said that the Government would collaborate closely and maintain communication with the Mainland authorities to ensure compliance.

22. The Chairman expressed support towards the efforts of the Government in introducing various measures for reducing air pollution emission sources from the marine sector.

Item 4 : Progress Report on the Promotion of Charter on External Lighting
(ACE Paper 14/2017)

23. The Chairman thanked the Secretariat for making available a background note on the subject matter, which had been circulated to Members for reference before the meeting.

24. Two Members declared that they were members of the Working Group on the Promotion of the Charter on External Lighting (the Working Group). The meeting agreed that both Members could stay on and participate in the discussion.

[Mrs Dorothy Ma joined the meeting at this juncture.]

Presentation cum Question-and-Answer Session (Open session)

25. Mrs Dorothy Ma briefed Members on the Progress Report on the Promotion of Charter on External Lighting (the Charter), including the background and the implementation progress. She advised Members of the proactive actions taken by the Government to promote the Charter and the way forward for assessing the effectiveness of the Charter.

Recruitment of signatories and monitoring compliance

26. A Member enquired if the Government would set a target in the recruitment of signatories, in particular in districts where external lighting complaints were prominent. Mrs Dorothy Ma said that the task ahead was to recruit as many signatories as possible. As regards districts where external lighting complaints were prominent, on-site investigations had been conducted in such districts to collect information about the external lighting installations and to invite the owners of the installations to sign the Charter. In addition, upon the receipt of complaints, EPD would relay the complainants' concerns and requests to the persons responsible for the concerned lighting installations, and invite them to sign up to the Charter.

27. Noting that there were already over 4,800 signatories to the Charter, a Member enquired on the deployment of frontline staff to conduct on-site investigations especially when the number of signatories was expected to increase further. Mrs Dorothy Ma replied that consultants had been engaged to check signatories' compliance with the pledge to switch off external lighting at 11 p.m. or midnight. She supplemented that to further promote the Charter, ENB had launched a Partnership Scheme to invite advertising companies or professional associations to become Charter Partners, thereby encouraging other companies and clients through their networks to sign up their premises with external lighting installations to the Charter. Charter Partners would conduct initial vetting to check compliance of the signatories with the Charter. ENB also worked closely with the Working Group to explore alternative ways to monitor compliance.

28. Concurring with another Member's view that there were limited resources in conducting monitoring work, a Member suggested the Government explore more innovative means, such as developing citizen's programmes by means of the social media to enable community-based monitoring. He anticipated that this approach would create a pressure for installation owners to adhere to the switch-off requirement, and also enhance public awareness and interest on the issue of light nuisance.

29. A Member suggested the Government consider creating a "smart city" through innovative technology. He suggested exploring collaboration opportunities with the power companies on installing devices whereby compliance record and data collected by the devices could be transmitted to EPD. In addition, EPD could consider approaching the Logistics and Supply Chain Management Research and Development (LCSM R&D) Centre of the Innovation and Technology Commission (ITC) on developing a monitoring system by installing sensor devices on the external lighting installations.

30. Mrs Dorothy Ma said that some business establishments were not ready to sign up to the Charter as their external lighting installations had yet to be equipped with automatic control, such as timer switches, but they would be pleased to consider signing the Charter after their external lighting installations had been upgraded. She noted that the power companies were happy to offer commercial customers energy saving advice, including the installation of timer switches to switch off external lighting after business hours or at the preset time.

31. A Member opined that signatories should be encouraged to switch off lighting for decorative or promotional purposes during daytime to avoid wastage and nuisance. Mrs Dorothy Ma said that the Task Force on External Lighting (the Task Force) had received, during its public engagement exercise, comments about the lighting up of signboards during daytime. While there were concerns about possible energy wastages, some respondents pointed out that electronic/digital signboards had to be switched on to display the content of the signboards even during daytime. Nevertheless, the Government would continue to encourage signboard owners to lower the intensity of external lighting for the purpose of minimizing nuisance and energy wastage with reference to the Guidelines on Industry Best Practices for External Lighting Installations (the Guidelines) which covered, amongst others, recommendations on the light intensity of the installations. The Government had engaged a consultant to organise a series of seminars for Charter signatories and professional associations to encourage them to observe the Guidelines.

Provision of incentives

32. Considering that the Charter was a voluntary scheme, a Member suggested that more incentives should be provided to keep up the momentum of the Charter and sustain the signatories' commitment to comply with the switch-off requirement. He suggested that greater monitoring and publicity efforts could be made at the district level by engaging the local communities and District Councils.

33. Mrs Dorothy Ma advised that awards and certificates would be granted to signatories that adhere to the switch-off requirement under the Charter. In addition, a dedicated Charter website had been launched recently by ENB, setting out the list of signatories. In response to Members' suggestion, she undertook to explore the possibility of categorizing the list of signatories according to different districts as suggested by Members. She added that ENB had visited some District Councils to promote the Charter and invite District Councillors to suggest potential organizations and shops that might be invited to sign the Charter. Noting that the Charter had only been launched for one year, Mrs Ma said that more time was needed to enhance public awareness of the Charter and the Government would continue to invite more organizations/shops to join the Charter.

34. Considering that there were quite a number of existing distinguished environmental awards/certificates offered by corporates or non-Government organizations (NGOs), a Member suggested inviting these establishments to

consider incorporating external lighting as one of the assessment criteria in granting the awards/certificates. This could help generate publicity for the Charter and create greater incentive for organizations/shops to join and adhere to the switch-off requirement under the Charter.

35. While expressing support for the implementation of the Charter, a Member was of the view that the awards/certificates granted under the Charter might not be attractive to sustain the signatories' commitment. She suggested the Government review the award scheme and consider more innovative elements to attract public interest and attention.

36. In reply to a Member's suggestion for introducing financial incentives/disincentives, the Chairman said that there might be difficulties for upward adjustment of electricity charges after the preset time as there was a genuine need for the operation of the external lighting installations for some sectors/industries. He mentioned however that there were intrinsic financial incentives in the act of switching off lighting installations itself as the consumption of electricity and the associated costs could be reduced.

Effectiveness of the Charter

37. In response to the Chairman's enquiry on whether there would be key performance indicators to assess the effectiveness of the Charter, Mrs Dorothy Ma explained that the Government would assess the effectiveness of this administrative measure around 2018 to 2019 by conducting a survey on public response to the Charter and how the business establishments respond to complaints from the public, etc. The Government would also take into account the recommendations proposed by the Task Force in determining appropriate indicators to assess the effectiveness of the Charter.

38. A Member agreed with the Chairman that the number of complaints could be regarded as one of the key performance indicators, and he further enquired about the complaints statistics. Mrs Dorothy Ma advised that around 200 to 300 complaints on external lighting were received annually since 2010, and around 60 complaints were received in the first quarter of 2017.

39. A Member mentioned that the "Hong Kong Night Sky Brightness Monitoring Network" (NSN) of the University of Hong Kong had set up measurement stations to monitor continuously the variation of night sky brightness

at 19 locations/districts as an indicator of the level of light pollution. He suggested the Government consider collaborating with NSN in using its monitoring data to assess the effectiveness of the Charter.

40. A Member concurred and remarked on the importance to formulate objective indicators for assessing the effectiveness of the Charter, for example the number of complaints received and the light intensities in different districts.

Public education and promotion

41. Echoing a Member's comment that community-based monitoring could help increase public awareness, the Chairman further suggested gathering the momentum of the Charter by creating "photo opportunities", such as by installing prominent clocks that would chime at the specified preset time.

42. With the observation that there was a lack of media coverage on the issue of light nuisance caused by external lighting, a Member suggested the Government consider engaging and providing funding support to local non-profit making organizations for organizing educational programmes and activities to enhance public awareness and understanding on the Charter and on the issue of light nuisance, as well as to gauge responses from the community.

43. While agreeing that it might not be necessary to introduce lighting regulations at this stage, a Member remarked that it was important to strengthen actions to raise public awareness towards the issue of light nuisance and the Charter. She suggested engaging Green groups or NGOs to enhance the promotion of the Charter at the community level. She opined that a clear message should be delivered to the society that the Government was devoted to meeting public aspiration for a city without light pollution through the implementation of the Charter. She further suggested the Government expedite actions to gauge public response on the implementation of the Charter and to evaluate the public perception of light nuisance.

Conclusion

44. Mrs Dorothy Ma thanked Members for their suggestions and assured that ENB the suggestions would be relayed to the Working Group for deliberation. The Chairman concluded that Members were in general supportive of the Charter and

thanked Mrs Ma for her presentation.

[Mrs Dorothy Ma left the meeting at this juncture.]

Internal Discussion Session (Closed-door session)

45. Mr Donald Tong said that various sectors responded positively to the implementation of the Charter. He was confident that the implementation of the Charter could maintain the momentum and he added that the Government would continue to actively recruit signatories and to promote the Charter by working closely with the Working Group. He remarked that the complaint statistics itself might not be a reliable and objective assessment of the effectiveness of the Charter, as an increase in the number of complaints might not necessarily signify an intensified light pollution, but might be related to possibly higher public awareness and/or greater ease of lodging complaints with more channels available. Regarding the legislative need of regulations on external lighting, Mr Tong said that a host of factors must be considered which included the effectiveness of the Charter, public interests, and the feasibility of reaching a consensus with the industry amongst others. He agreed with Members that public education and promotion were essential for the effective implementation of the Charter and said that their suggestions would be relayed to the Working Group for consideration.

Item 4 : Any other business (Closed-door session)

46. A Member suggested the Secretariat consider providing a summary of major comments raised by Members in previous discussions for projects and/or proposals that had been substantively discussed at earlier ACE meetings. Mrs Alice Cheung explained that as there were often numerous and diverse comments from Members and a consensus might not be always reached, it might not be practicable to produce a succinct summary of views. After deliberations, the meeting agreed that a hyperlink should be provided for all the documents mentioned in the background note with an aim to facilitating Members' ease of revisiting past discussions. Secretariat

47. There was no other business for discussion at the meeting.

Item 5 : Date of next meeting (Closed-door session)

48. Since there were no urgent issues requiring deliberations by ACE, the Chairman said that the Council would take a summer break in August. The next

Action

ACE meeting was scheduled on 4 September 2017 (Monday). Members would be advised on the agenda in due course.

ACE Secretariat

August 2017