

**AIR QUALITY OBJECTIVES (AQO) REVIEW WORKING GROUP
MARINE TRANSPORTATION SUB-GROUP**

**Digest of the 6th Meeting
held on 16 February 2017 at 2:30 p.m.
in Conference Room, 33/F., Revenue Tower, 5 Gloucester Road, Wanchai**

Present:

Ms. Christine LOH	Under Secretary for the Environment (Chairperson), Environment Bureau (ENB)
Mrs. Alice CHEUNG	Deputy Director of Environmental Protection (3) (Vice-chairperson), Environmental Protection Department (EPD)
Mr. Arthur BOWRING	
Mr. Danny WU	
Mr. David KONG	
Mr. Ellis CHUNG	
Mr. FUNG Pak-sing	
Mr. Jeff BENT	
Ms. Jessie CHUNG	
Mr. KEUNG Siu-fai	
Mr. Simon NG	
Mr. Tony TONG	
Mr. MOK Wai-chuen	Assistant Director of Environmental Protection (Air Policy), EPD
Ms. Louisa YAN	Principal Assistant Secretary (Transport)10, Transport and Housing Bureau (THB)
Mr. LUI Kam-leung	Senior Surveyor of Ships (Planning & Training), Marine Department (MD)

In Attendance:

Dr. Peter LOUIE	Senior Environmental Protection Officer (Air Policy) 5, EPD
Mr. Simon LAM	Environmental Protection Officer (Air Policy) 11, EPD

Dr. Jackie NG	Assistant Environmental Protection Officer (Air Policy) 12, EPD
Ms. Queenie CHAU	Assistant Environmental Protection Officer (Air Policy) 14, EPD
Mr. Ping KONG	Consultant's representative, AECOM Asia Co. Ltd.

Absent with apologies:

Mr. Brian LAU	Acting Principal Environmental Protection Officer (Air Policy), EPD
Mr. CHIANG Sui-ki	
Mr. David WONG Yui-cheong	
Prof. John LIU Jian-hua	
Mr. KWOK Tak-kee	
Ms. Sandy MAK	
Mr. Sunny HO	

The **Chairperson** welcomed Members to the 6th meeting of the marine transportation sub-group.

Agenda Item 1 – Confirmation of Digest of the Fourth and Fifth Meetings

2. The revised draft digest of the fourth meeting and the draft digest of the fifth meeting held on 29 November 2016 and 10 January 2017 respectively were confirmed.

Agenda Item 2 – Discussion on the revised assessment on the practicability to implement the proposed measure B1 “Impose emission standards on outboard engines of local vessels” under “Technical measures” according to the comments from Members at the previous meeting

3. Based on the deliberations on the proposed measure B1 “Impose emission standards on outboard engines of pleasure crafts” under “Technical measures” in the fifth sub-group meeting on 10 January 2017, the Secretariat beefed up the assessment with the quantity of outboard engines and the supply of both petrol-fueled and diesel-fueled outboard engines in Hong Kong, and revised its practicability of implementation. The revised assessment of the proposed measure, which was renamed as “Impose emission standards on outboard engines of local vessels” to better reflect its

objective, had been sent to Members before the meeting. Members confirmed the revised assessment of the proposed measure as summarized in **Annex A**.

Agenda Item 3 – Discussion on the assessments on the practicability to implement the proposed measures under “Fuel economy, energy efficiency and port management”

4. Mr. Simon NG declared his interest that he had been commissioned by EPD in January 2017 to undertake a consultancy study on green ferries.

5. The Administration briefed Members on the draft assessments on the practicability to implement the proposed measures under “Fuel economy, energy efficiency and port management”. Members’ comments are summarized in the **Annex A**.

6. Members confirmed the assessments on the proposed measures under “Fuel economy, energy efficiency and port management”.

7. In response to a Member’s query on the specific timeframe defined by different ratings (i.e. short-, medium- and long-term) on the practicability to implement the proposed measures, the Administration responded that it would be difficult to set clear timeframes of these ratings in view of the complexity and diverse implications of the proposed measures. In general, for measures that would unlikely be ready for implementation within the assessment period of this AQO review, they would be rated as medium-term or long-term measures.

Agenda Item 4 – Discussion on key considerations for the implementation of proposed measures under “Other suggestions”

8. The Administration briefed Members on the evaluations of key considerations for implementing the proposed measures under “Other suggestions”. The Administration advised that the proposed measures have no direct relationship with the reduction of emissions in marine vessels.

9. Members agreed to remove the proposed measures D1 and D2 from the list of proposed new air quality improvement measures of this sub-group and comments on the measures are summarized in the **Annex B**.

Agenda Item 5 – Any other business

10. The Administration advised that this is the last meeting of the sub-group and thanked Members for their contributions to the fruitful deliberations of the sub-group. The outcomes of the sub-group's deliberations on the practicability to implement the new air quality improvement measures are summarized in **Annex C** according to their ratings of practicability.

11. In response to a Member's query on the objectives and recommendations of the last AQO review, the Secretariat would provide the relevant information and reports to Members for information after this meeting.

[Post-meeting note: The Secretariat had sent the relevant information and reports published on the EPD website to Members via e-mail on 26 April 2017.]

12. Members expressed appreciation on the Administration's effort in preparing the meeting documents with in-depth technical information.

Agenda Item 6 – Date of the next meeting

13. This is the last meeting of the Marine Transportation sub-group. The meeting was adjourned at 3:25 p.m.

Members' comments on the assessments on the practicability to implement the proposed measure B1 and measures C1 to C4

Proposed new air quality improvement measures	Comments from Members and the conclusion
<i>B. Technical measures</i>	
B1. Impose emission standards on outboard engines of local vessels	<p><u>Comments from Members:</u> Members confirmed the assessment.</p> <p><u>Conclusion:</u> Practicability for implementation: Medium-term The sub-group concluded that while it is technically feasible to use low emission petrol outboard engines at local vessels, a detailed consultation with the shipping trade is required to ascertain its implementation. The government would carry out a detailed feasibility study and thoroughly consult the relevant trade to address their concerns before pursuing the proposed measure.</p>
<i>C. Fuel economy, energy efficiency and port management</i>	
C1. Explore financial incentive and disincentive schemes to encourage liners to use less polluting ocean-going vessels (OGVs) calling Hong Kong ports	<p><u>Comments from Member:</u> Members confirmed the assessment with the following suggestions.</p> <ul style="list-style-type: none"> ● To extend the existing port facilities and light dues incentive scheme after its expiration on 31 March 2018 for OGVs using marine fuel with sulphur content not exceeding 0.1%; ● To tie in with the incentive schemes provided by our neighboring ports in the Pearl River Delta (PRD) region (e.g. the subsidies on using 0.1% sulphur marine fuel provided by Shenzhen), or to provide more attractive incentive schemes for the benefit of port competitiveness.

Proposed new air quality improvement measures	Comments from Members and the conclusion
	<p><u>Conclusion:</u></p> <p>Practicability for implementation: Medium-term</p> <p>The sub-group concluded that the provision of financial incentive schemes should be pursued on a regional basis to increase its attractiveness and effectiveness in encouraging more OGVs operators to deploy green vessels to the PRD region. The government will maintain dialogues with the trade and seek opportunities of collaboration with other ports in the PRD region.</p>
<p>C2. Optimize port efficiency to shorten waiting and turnaround time of OGVs and river trade vessels at container terminals, river trade terminals and public cargo working areas (PCWA)</p>	<p><u>Comments from Members:</u></p> <p>Members confirmed the assessment with the following suggestions.</p> <ul style="list-style-type: none"> ● The government could consider the provision of financial incentive schemes and optimization of port efficiency in a holistic approach; ● The government should review the long-term strategic planning on the land uses surrounding the container terminals; <p><u>Conclusion:</u></p> <p>Practicability for implementation: Others</p> <p>Measures to optimize port efficiency have been extensively discussed in the Hong Kong Maritime and Port Board (HKMPB). The sub-group concluded that the Government would keep in view the discussions in the HKMPB, and would take on board the outcome of the discussions to study the associated emission reduction potential.</p>
<p>C3. Slow-steaming of OGVs in Hong Kong waters</p>	<p><u>Comments from Members:</u></p> <p>Members confirmed the assessment.</p> <p><u>Conclusion:</u></p>

Proposed new air quality improvement measures	Comments from Members and the conclusion
	<p>Practicability for implementation: Others – not practicable</p> <p>The sub-group concluded that the proposed measure is not practicable to implement.</p>
<p>C4. Encourage academia to carry out studies on fuel and energy efficient measures in terms of operation and maintenance for local vessels’ and collaboration between academia and local marine trade for the development of best practice guidelines and award system to facilitate adoption of the measures</p>	<p><u>Comments from Members:</u></p> <p>Members confirmed the assessment.</p> <p><u>Conclusion:</u></p> <p>Practicability for implementation: Long-term</p> <p>The sub-group concluded that the Government should explore opportunities to facilitate long-term collaboration between the local marine trade and academia in pursuing the proposed initiative.</p>

Members' comments on the key considerations of implementing the proposed measures D1 and D2

Measure D1 – Remove floating rubbish for smooth operation of small local vessels

Key Considerations	Comments from Members/Administration
1. Resource implications	<ul style="list-style-type: none"> The Administration advised that the proposed measure has no direct relationship with emission reduction in local vessels, and Members considered it is more relevant to navigation safety. The sub-group agreed to remove it from list of proposed new air quality improvement measures.
2. Feasibility	

Measure D2 – Government to expedite the approval process of new local vessels

Key Considerations	Comments from Members/Administration
1. Resource implications	<ul style="list-style-type: none"> The Marine Department advised that parts of the approval works of new local vessels could be carried out by the authorized classification societies effective from the first quarter of 2017 tentatively. The approval process of new local vessels is expected to be shortened. The Administration advised that the proposed measure has no direct relationship with emission reduction in local vessels. The sub-group agreed to remove it from list of proposed new air quality improvement measures.
2. Feasibility	

**Summary of the outcomes of deliberations on the practicability to implement the proposed
new air quality improvement measures**

Item*	Proposed new air quality improvement measures	Conclusions agreed by the sub-group
<u>Practicability of implementation: Short-term</u>		
A4	OGVs at berth to use marine diesel with lower fuel sulphur content, e.g. not exceeding 0.1%	The proposed initiative could be practicable if 0.1% sulphur marine diesel becomes widely available, particularly in this region. But, it should be pursued on a regional basis to avoid jeopardizing the competitiveness of local ports. Starting from January 2019, vessels within the PRD Domestic Marine Emission Control Area (DECA) are required to use low sulphur marine fuel (sulphur content not exceeding 0.5%) and the Ministry of Transport also plans to determine whether to further tighten the fuel sulphur limit in the PRD DECA to 0.1% by end 2019. The government would proceed to ascertain the availability of the 0.1% sulphur fuel in Asia and assess the implications to the trade with a view to introducing the new measure as soon as practicable, and even ahead of end-2019 should that be practicable.
A5	Local vessels to use electricity from the power grid while at berth	Operators of local vessels can approach the power companies for the setting up of power supply installations at the piers for their use, provided that the conditions such as space, safety and operation requirements could be satisfied by the power companies and the relevant authorities. The proposed initiative has already been adopted by local vessel operators.
<u>Practicability of implementation: Medium-term</u>		
B1	Impose emission standards on outboard engines of local vessels	Although it is technically feasible to use low emission petrol outboard engines at local vessels, a detailed consultation with the shipping trade is required to ascertain its implementation. The government would carry out a detailed feasibility study and thoroughly consult the relevant trade to address their concerns before pursuing the proposed measure.

Item*	Proposed new air quality improvement measures	Conclusions agreed by the sub-group
C1	Explore financial incentive and disincentive schemes to encourage liners to use less polluting OGVs calling Hong Kong ports	The trade prefers the provision of financial incentive schemes. The sub-group considers that it should be pursued on a regional basis to increase its attractiveness and effectiveness in encouraging more OGVs operators to deploy green vessels to the PRD region. The government will maintain dialogues with the trade and seek opportunities of collaboration with other ports in the PRD region.
<u>Practicability of implementation: Long-term</u>		
A1	Explore the use of Liquefied Natural Gas (LNG) for marine vessels	The Government should develop the technical requirements and associated safety regulations for using LNG in marine vessels while keeping a close watch on all relevant developments for planning ahead the development of LNG bunkering facilities in Hong Kong; and explore collaboration within the PRD region on LNG bunkering.
A2	Explore the use of biofuel (e.g. B5), fuel cell, Liquefied Petroleum Gas (LPG), compressed natural gas (CNG), methanol, nuclear and renewable energy, e.g. wind and solar energy, etc. for marine vessels	These alternative fuels are unlikely to become a mainstream marine fuel in the foreseeable future because of various constraints. The Government should keep watch of the relevant technological developments such that their potential for a wide application in the marine sector can be revisited timely.
A3	Explore the use of hybrid, diesel electric and electric vessels	These technologies are unlikely to replace conventional powering technologies of vessels in the foreseeable future. The Government should keep close monitoring of the technology development of hybrid, diesel-electric and electric vessels in adopting these technologies in local marine application.
A7	OGVs to use on-shore power supply (OPS) while at berth (for cruise terminal)	For Kai Tak Cruise Terminal, the Government should continue to keep close monitoring of the international and regional development in the use of OPS for cruise ships, so that timely action could be taken to pursue the use of OPS for cruise ships.
C4	Encourage academia to carry out studies on fuel and energy efficient measures in terms of operation and maintenance	The Government should explore opportunities to facilitate long-term collaboration between the local marine trade and academia in pursuing the proposed initiative.

Item*	Proposed new air quality improvement measures	Conclusions agreed by the sub-group
	for local vessels; and collaboration between academia and local marine trade for the development of best practice guidelines and award system to facilitate adoption of the measures	
<u>Practicability of implementation: Others</u>		
A6	River trade vessels to use OPS while at berth at terminals	The proposed initiative is not practicable to implement.
A7	OGVs to use OPS while at berth (for container terminals)	The proposed initiative at container terminals is not practicable to implement.
B2	Install emission reduction device (e.g. particulate filters) to reduce particulate matters (PM) emitted from local vessels	The scope for applying the proposed measure on local vessels is expected to be very limited.
B3	Impose control on nitrogen oxides (NOx) emissions from engines of local vessels	The scope for applying the proposed measure on local vessels is very limited.
C2	Optimize port efficiency to shorten waiting and turnaround time of OGVs and river trade vessels at container terminals, river trade terminals and public cargo working areas (PCWA)	Measures to optimize port efficiency have been extensively discussed in the HKMPB. While the optimization of port efficiency may involve long term planning, the Government would keep in view the discussions in the HKMPB, and would take on board the outcome of the discussions to study the associated emission reduction potential.
C3	Slow-steaming of OGVs in Hong Kong waters	The proposed measure is considered not practicable.

* Items with prefix A, B and C refer to measures under categories of “Use of clean fuel”, “Technical measures” and “Fuel economy, energy efficiency and port management” respectively.