

**AIR QUALITY OBJECTIVES (AQO) REVIEW WORKING GROUP
ENERGY AND POWER GENERATION SUB-GROUP**

**Digest of the 1st Meeting
held on 8 July 2016 at 2:30 p.m.
in Room 1523, East Wing, Central Government Offices, Tamar**

Present:

Ms Christine LOH	Under Secretary for the Environment (Chairperson), Environment Bureau (ENB)
Mr. Andrew LAI	Deputy Director of Environmental Protection (3) (Vice-Chairperson), Environmental Protection Department (EPD)
Mr. Joseph LAW Ka-chun	
Ir YEE Tak-chow	
Professor Larry CHOW	
Ir Edmond FONG Wai-man	
Ms. Susanna NG	
Ir Cary CHAN	
Mr. Brandon LIU	
Dr. William YU	
Mr. Prentice KOO	
Mr. Brian LAU Man-pang	Acting Principal Environmental Protection Officer (Air Policy), EPD
Ms. Queenie LEE Lai-kwan	Principal Assistant Secretary for the Environment (Electricity Reviews), ENB
Mr. Desmond CHENG Suen-lok	Assistant Secretary for the Environment (Energy)2, ENB
Mr. Raymond LEE Wai-man	Chief Assistant Secretary (Works 3), Development Bureau (DEVP)
Mr. Barry CHU Kei-ming	Chief Engineer/Energy Efficiency A, Electrical and Mechanical Services Department (EMSD)
 <u>Absent with apologies:</u>	
Mr. MOK Wai-chuen	Assistant Director of Environmental Protection (Air Policy), EPD

Professor Raymond SO Wai-man

Dr. CHAN Ka-lung

Mrs. Christine CHEUNG

In Attendance:

Mr. C.H. KAN	Senior Environmental Protection Officer (Air Policy) 4, EPD
Ms. Josephine HO	Acting Senior Environmental Protection Officer (Air Policy) 1, EPD
Mr. Simon LAM	Environmental Protection Officer (Air Policy) 11, EPD
Mr. Nick TSANG	Environmental Protection Officer (Air Policy) 43, EPD

Chairperson's Remarks

The **Chairperson** welcomed Members to the first meeting of the Energy and Power Generation Sub-group and briefed Members on the agenda of the meeting.

Agenda Item 1 – Guidelines on “Declaration of Interests”

2. The Administration briefed Members on the guidelines on “Declaration of Interests”

Agenda Item 2 – Terms of reference and work plan of the sub-group (E&PG Paper 1/2016)

3. The Administration briefed Members on the terms of reference and work plan of the sub-group. Members did not raise any comment.

Agenda Item 3 – Overview of the emission control measures on power generation and energy efficiency (E&PG Paper 2/2016)

4. The Administration briefed Members on emissions from electricity generation in 2014 as well as the latest emission control measures on power plants and energy efficiency measures.

5. In response to a member's enquiry, the Administration explained that several key factors were used for projecting emissions of power plants, including electricity consumption, fuel mix for power generation, and the emission performance of new and existing generation units.

Agenda Item 4 – Exploring new air quality improvement measures for power generation and energy efficiency

6. Members raised the following new air quality improvement measures at the meeting:

Building energy efficiency measures

- (a) Encourage stakeholders in the commercial sector and the non-government sector including universities, public facilities, hospitals, etc. that high in electricity usage to adopt demand-side management (DSM) measures.
- (b) Explore building energy efficiency measures for old existing buildings that were not covered by the Building Energy Efficiency Ordinance.
- (c) Encourage major electricity users to reduce their peak load demand so as to reduce the operation and emissions from coal-fired generation units for coping with peak load demand.

Power Generation

- (d) Replace coal-fired generation units by gas-fired units.
- (e) Upgrade burners of gas-fired generation units to improve fuel efficiency and emission performance.
- (f) Consider importing more nuclear electricity from the Mainland.
- (g) Review operations of gas-fired power generation units with a view to identifying further emission reduction potential. A member explained that the operation of gas-fired generation units was subject to the electricity demand, supply of natural gas as well as scheduled maintenance program. There was hence limited room to adjust their operations to further reduce emissions.

Use of renewable energy

- (h) Increase the use of wind and solar energy in electricity generation
- (i) Encourage or provide incentives for the private sector to develop distributed renewable energy (RE).
- (j) Facilitate distributed RE systems to connect to the power grid.
- (k) Explore the idea of “SolarRoad” for promoting the use of solar energy.

Waste to energy

- (l) Encourage the development of more small scale waste-to-energy facilities, such as waste incinerators, organic waste treatment plants, etc. for waste disposal as well as recovering energy for local use.
- (m) Explore the use of waste materials such as corncobs, waste wooden pallets as fuel.

Other suggestions

- (n) Explore the feasibility of using electric vehicles (EV) as electrical energy storage for power grid (serve as backup power, load regulator, etc). A member pointed out that this measure might not be well-received by EV owners as the repeated charging and discharging of batteries could have adverse impact on battery life. Instead, he added that some countries were exploring the use of old EV batteries as an electrical energy storage system for the power grid.
- (p) Mandate vessels to use on-shore power supply while at berth.
- (q) Tighten the fuel quality for local vessels.

7. The Administration made the following responses to Members’ suggestions and views:

- (a) This meeting aimed at brainstorming on new air quality improvement measures for the energy and power generation. Members were encouraged to make suggestions first while the practicability of implementing the

proposed measures would be further discussed in coming meetings.

- (b) The prevailing energy policy has four objectives, i.e. safety, reliability, environmental performance and affordability. The implementation of any new energy measures should seek to achieve these objectives.
- (c) With respect to the proposed measures relevant to road transportation and marine transportation, the Administration would refer the measures to the relevant sub-groups for further consideration.
- (d) The Administration would compile a list of the new air quality improvement measures suggested by Members at this meeting so as to facilitate further discussions of the next meeting.

[Post-meeting note: A list of new air quality improvement measures with their key considerations was incorporated in E&PG Paper 3/2016 for discussion in the next sub-group meeting.]

Agenda Item 5 – Any other business

- 8. No other business was raised. The Chairperson encouraged Members to submit further suggestions to the Secretariat.

Agenda Item 6 – Date of the next meeting

- 9. The next meeting would be held on 18 August 2016 (Thursday). The meeting was adjourned at 3:55 p.m.