

## **Subcommittee on Improving Air Quality**

### **Responses to the Follow-up Actions**

#### **Arising from the Discussion at the Meeting on 11 May 2010**

#### **Administration's response to follow-up actions arising from the discussion at the meeting on 4 January 2010**

**(1) To advise the existing licensing requirements for electric motor cycles and details of the five registered electric motor cycles in Hong Kong**

All motor vehicles, driven by either an internal combustion engine or an electric motor, intended for use on roads should be registered and licensed as required by the Road Traffic Ordinance (Cap. 374). Generally, the type approval and registration procedures and requirements for an electric motor cycle are the same as those for a conventional motor cycle. Electric motor cycles shall be roadworthy and have to comply with the relevant road traffic regulations (eg. Cap. 374A) and environmental regulations (eg. Cap. 400I) in order to be type approved and allowed to be registered in Hong Kong.

In accordance with Regulation 50A of the Road Traffic (Registration and Licensing of Vehicles) Regulations, Cap. 374E, the Commissioner for Transport may issue an expressway permit to the registered owner of an electric vehicle, which permits the electric vehicle to be used on an expressway.

As at 31 May 2010, there were 5 electric motor cycles registered in Hong Kong, the manufacturer and model of which are Shang Wei EV Tech Inc. and SWAP respectively. The vehicles were first registered in April 2002. Transport Department has not received any expressway permit applications from the registered owners of the five electric motor cycles in respect of the vehicles concerned.

## **Measures in addressing serious air pollution incidents, including impacts on sandstorm**

- (2) To provide a paper on the review of the operation of the Air Pollution Index System, including the scope of review, terms of reference, and panel of members etc. To also relay members' view to the review panel so that these could be taken into account in the context of the review.**

Please refer to **Annex A**.

## **A proposal to control emissions of non-road mobile sources**

- (3) To advise the basis upon which the proposed penalty regime is arrived at and how this compares with other overseas jurisdictions, including Japan, USA and Canada. To ensure that importers and the logistical trades are consulted on the proposal.**

When drawing up the penalty regime, we made reference to provisions in the Air Pollution Control Ordinance (Cap. 311) and the Ozone Layer Protection Ordinance (Cap. 403) and their subsidiary regulations on the import, manufacture and sale of controlled substances. The penalty provisions are at Annex B of the Proposal Document.

We also made reference to overseas jurisdictions' penalty regimes in controlling emissions from non-road mobile sources. A comparison of the proposed penalty regime with those of the United States, Japan and Canada is provided at **Annex B**.

We have included in our consultation the logistical trades and importers of non-road mobile machinery.

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**SUBCOMMITTEE ON IMPROVING AIR QUALITY**

**Review of the Air Pollution Index System**

**Purpose**

As requested by Members at the meeting on 11 May 2010, we report in this paper on the progress of the review of the Air Pollution Index (API) system.

**Background**

2. Making reference to the USA's Pollution Standard Index, we introduced the current API system in 1995 to help communicate to the public the air pollution level. The API system informs the public of an index ranging from 0 to 500, which are grouped into five bands – low, medium, high, very high and severe – alongside a set of health advice such that the public can easily understand the health risks that they are exposed to and the precaution that they need to take.

3. The API is calculated and reported for each air quality monitoring station (both general and roadside stations) on an hourly basis by firstly comparing the measured concentrations of five key air pollutants<sup>1</sup> with their respective Air Quality Objectives (AQOs) to form sub-indices. The maximum of these sub-indices for the hour is taken as the hourly API for the monitoring station in question. An API of 100 corresponds to the short-term AQO values (i.e. 1-hour to 24-hour limit values). Thus, an API exceeding 100 means that the AQO of one or more pollutants have been exceeded and may pose health risks to some susceptible members of the community, such as those with respiratory or heart illnesses. More

---

<sup>1</sup> The key air pollutants include sulphur dioxide, nitrogen dioxide, ozone, respirable suspended particulates, carbon monoxide.

details of the system are at **Appendix I**.

4. The API of the general stations (i.e. the general API) reflects the air quality to which the general public would normally expose to whereas the API of the roadside stations (i.e. the roadside API) reflects the air quality at street level in urban areas.

5. Systems similar to our API system are widely used in many other economies such as USA, UK, Singapore and Korea.

### **The API Review Study**

6. There are new API reporting systems being examined and introduced in other jurisdictions. In the light of the international developments, the Environmental Protection Department commissioned a study to review the API system. In response to the tender invitation, a study team led by the Chinese University of Hong Kong submitted a technical proposal and was subsequently accepted. The membership of the study team comprises leading local medical and air science experts.

7. The scope of work of the study is as follows:

- (a) to develop an API reporting system in Hong Kong for accurate and timely communication of the health risks due to ambient air pollution to the public with full justifications and after thorough trial runs using local air quality and health data; and
- (b) when the proposed new index system is found to be acceptable, to develop a turn-key system to come with detailed instruction manuals, necessary software and thorough staff training courses, and to recommend a detailed plan for smooth transition from the existing to the new reporting system.

8. The study team has reviewed the major air quality index systems around the world. It is examining the feasibility of improving our API

system. The study team is now drawing up the proposal and engaging experts in the field for exchange of views. They would also consider the comments on the current API system made by the Members of this Subcommittee at the meeting on 11 May 2010 during the discussion on dust weather incidents.

9. Upon receipt of the findings from the study, Government will consider whether and if so how best the current API system is to be improved.

**Environmental Protection Department**  
**July 2010**

## Appendix I to Annex A

### Existing Air Pollution Index System

<b>Air Pollution Bands</b>	<b>API</b>	<b>Air Quality Status</b>
Severe	201 to 500	Air quality significantly worse than both short-term (1-hour, 8-hour and 24-hour averages) and long-term (1-y average) AQOs.
Very High	101 to 200	Air quality worse than both short-term (1-hour, 8-hour and 24-hour averages) and long-term (1-y average) AQOs.
High	51 to 100	Air quality within the short-term AQOs (1-hour, 8-hour and 24-hour averages) but worse than the long-term (1-y average)AQOs.
Medium	26 to 50	Air quality within all AQOs.
Low	0 to 25	Air quality well within all AQOs.

## Comparison of the Proposed Penalty Regime with Those of Overseas Jurisdictions

Hong Kong's proposed penalty regime	USA's penalty regime	Japan's penalty regime	Canada's penalty regime
<p>Maximum penalty of HK\$200,000 and 6 month's imprisonment for the following offences:</p> <ul style="list-style-type: none"> <li>Importing a non-exempt nonroad mobile machinery (NRMM); placing a locally manufactured NRMM or an NRMM imported for re-export on the local market without a valid approval document</li> <li>Violating the conditions imposed in an import approval</li> </ul> <p>Maximum penalty of HK\$50,000 and 3 month's imprisonment for the following offences:</p> <ul style="list-style-type: none"> <li>Importing a non-exempt NRMM; placing a locally manufactured NRMM or an NRMM imported for re-export on the local market without affixing a label according to EPD's requirement.</li> <li>For an NRMM approved for import and exempted from emission compliance, not keeping proper records for 3 years for EPD's inspection</li> </ul>	<p><i>U.S. Code, Title 42, Section 7524:</i></p> <ul style="list-style-type: none"> <li>Anyone who illegally imports an engine may be fined up to US\$32,500 (about HK\$250,000) per engine.</li> </ul> <p><i>CFR, Title 40, Part 1068.335, 89.612, 90.613, 91.705, 94.805:</i></p> <ul style="list-style-type: none"> <li>Anyone who distributes in commerce, sells, offers for sale, or introduces into commerce an engine subject to EPA certification requirements but not covered by a certificate of conformity, may be fined up to US\$32,500 (about HK\$250,000) per violation.</li> </ul>	<p><i>Act on Regulation, etc. of Emissions from Non-road Special Motor Vehicles, Chapter 6:</i></p> <ul style="list-style-type: none"> <li>Any person who has violated provisions of the non-road Regulation will be liable to a maximum penalty of ¥1,000,000 (about HK\$86,000) or 1 year's imprisonment.</li> </ul>	<p><i>Canadian Environmental Protection Act (CEPA), Section 272:</i></p> <ul style="list-style-type: none"> <li>The manufacturer or importer of engine not complying with the non-road regulations will be subject to the CEPA's provisions liable to a maximum penalty of CA\$1,000,000 (about HK\$7.4 Million) and 3 year's imprisonment.</li> </ul>