

REVISED PROPOSAL

TO CONTROL EMISSIONS OF NON-ROAD MOBILE SOURCES

INTRODUCTION

This document outlines the Government's revised proposal for controlling emissions of air pollutants from non-road mobile sources in Hong Kong.

BACKGROUND

2. In May 2010, we put forth for stakeholder consultation a proposed scheme to control emissions from non-road mobile machinery (NRMM), including those used at the airport, container terminals, construction sites etc. Under the proposal, the import of NRMMs would require approval from the Environmental Protection Department (EPD) subject to compliance with emission standards similar to those adopted by the European Union (EU), the United States (US) and Japan. Likewise, local manufacturers would have to obtain approval before placing their NRMMs on the local market.

3. In general, the stakeholders supported the introduction of emissions control on NRMMs, but were concerned about the approval process given that an estimated 90% of imported NRMMs were for re-export. To require the same approval for all imports would mean a large amount of unnecessary administrative work. In addition, since NRMMs may have to be shipped to Hong Kong within a few days after the placement of purchase orders, the proposed import approval may cause undue delay in delivery.

REVISED PROPOSAL

Overall Control Framework

4. To address the concerns of the stakeholders without prejudice to the effectiveness of the proposed emissions control, we suggest replacing the control on *import* by control of the *sale, lease and supply of NRMMs for local use*. In brief, all NRMMs (either new or second-hand) to be sold or leased for local use will have to meet the specified emission standards and approved by EPD. NRMMs approved by

EPD for local use will be properly labelled. Existing NRMMs in use before the introduction of the control regime will be exempt from the new requirements. They will also be properly labelled for easy identification. We also propose to specify clearly which activities with the possible use of NRMMs (*specified activities*) would be subject to the proposed control. The proposed revised control framework is as follows-

- (a) **Emission Standards** – EPD will formulate a set of emission standards applicable to NRMMs (with the exception of road vehicles used in non-road applications) by making reference to those of the US, the EU and Japan. Road vehicles used in non-road applications will have to meet the same emission standards as vehicles registered for on-road use.
- (b) **Approval prior to sale, lease and supply for local use** – Suppliers are required to obtain EPD’s approval in respect of emission compliance before selling, leasing or supplying their NRMMs (either new or second-hand) for local use. Each piece of approved NRMM shall be affixed with an approval label for identification.
- (c) **Exemption for existing NRMMs** - Before the new requirement is in place, owners of NRMMs currently used in *specified activities* are required to notify EPD of details of the NRMMs. Duly notified existing NRMMs will not be subject to the new requirements and will be affixed with an exemption label for identification.
- (d) **Prohibition of the use of NRMMs without approval or exemption labels** – Upon the commencement of the proposed emissions control, only those NRMMs with approval or exemption labels are allowed to be used in specified activities detailed in paragraph 15 below.

5. The control requirements are machine-based such that the approval or exemption label issued will be specific to the NRMM but not the engine. As long as any replacement engine is of the same model as the engine reported to EPD for obtaining the label, the label remains valid for the NRMM. However, if the replacement engine is of a different model from the original, the owner should make a fresh application for approval. The 'modified' NRMM cannot be used locally before EPD confirms its emission compliance. Stand-alone engines are not subject to the control requirements.

Scope of Control

6. The proposed regime should cover NRMMs used locally in the specified activities, as well as all NRMMs sold, leased or supplied for use in Hong Kong, which are –

(a) driven by engines running on diesel, petrol or LPG; and

(b) within the following range of power output-

$$19\text{kW} < \text{power output} \leq 560\text{kW}$$

unless exemptions are applicable.

7. Existing NRMMs with notice duly given to EPD before the introduction of the control regime are exempted from the new emissions control requirements.

8. NRMMs not for local use (including NRMMs imported for re-export, locally manufactured NRMMs solely for export, in-use NRMMs traded for export or for disposal) are not subject to the emissions control requirements.

9. Vehicles registered for on-road application and hence already required to meet emission standards stipulated in the Air Pollution Control (Vehicle Design Standards) (Emission) Regulations (Cap. 311J) will need no further approval from EPD. Vehicles used in non-road applications only and not registered with the Transport Department are within the scope of the proposed NRMM control regime.

Emission Control Requirements

10. The revised proposal adopts the same non-road emission standards of the EU, the US and Japan as originally proposed, which are recapitulated below.

(A) Compression Ignition (CI) engines, i.e. those running on diesel

| Machinery with engine power (P) in kW | Proposed standards adopted (on considerations of similar stringency) |
|--|---|
| $130 \leq P \leq 560$ | EU Stage IIIA, US Tier 3 or Japan MoE Stage 2 |
| $75 \leq P < 130$ | EU Stage IIIA, US Tier 3 or Japan MoE Stage 2 |
| $37 \leq P < 75$ | EU Stage IIIA, US Tier 3 or Japan MoE Stage 2 |
| $19 < P < 37$ | EU Stage IIIA, US Tier 2 or Japan MoE Stage 2 |

(B) Spark Ignition (SI) engines, i.e. those running on petrol or LPG

| Machinery with engine power (P) in kW | Proposed standard adopted (on considerations of similar stringency) |
|--|--|
| $19 < P \leq 560$ | US Tier 2 or Japan MoE current standard |

Application for EPD's Approval

11. Prior to selling, leasing or supplying non-exempted NRMMs (either new or second-hand) for local use, the supplier must apply for EPD's approval. The application shall include information of the supplier (such as name, contact, business registration, etc.), particulars of the NRMMs (trade name, model, serial number, etc.) and information of its engines (trade name, model, serial number, power output, etc.). Digital photos of the NRMMs (including machinery's nomenclature plate and engine's information label) should be submitted with the application. Supporting documents (such as copy of certificate of conformity obtained from US Environmental Protection Agency or the EU, certificate of compliance issued by manufacturers, etc.) should also be provided as proof of compliance with emission standards. EPD will issue approval upon satisfaction of emission compliance. NRMMs without EPD's approval, unless exempted, shall not be sold, leased or supplied for local use.

12. EPD may give *conditional approval* where conditions on the use or handling of the NRMM would be imposed. This is to cater for special applications, such as short-term application of special construction equipment not meeting the emission standards.

13. EPD will maintain a list of approved NRMMs for the trades' reference.

14. For the ease of identification, the approved NRMM shall be affixed with an approval label. A sample of the label is at **Appendix**.

Control of the Use of NRMMs in Specified Activities

15. Non-approved NRMMs, except the exempted ones (mainly NRMMs already in use before the new requirement takes effect) shall not be used in specified activities, including –

- (a) activities at any of the following locations:
 - i. the airport;
 - ii. port facilities including container terminal, river trade terminal and container backup facilities¹;
 - iii. construction sites; and
 - iv. designated waste disposal facilities²;and
- (b) specified processes stipulated in Schedule 1 of the Air Pollution Control Ordinance (Cap. 311).

16. Operators engaging in the specified activities (airport ground service providers, terminal operators, contractors of construction works, license holders of specified processes, etc.) must ensure that the non-exempted NRMMs used for their activities (including those acquired from suppliers, imported by the user, or manufactured by the user) are approved by EPD following the legal requirements.

17. The above specified activities are the major users of NRMMs and currently account for over 90% of the non-road emissions.

Exemption for Existing NRMMs

18. Existing NRMMs, which refer to those NRMMs already in use (including those in stock and on the market for sale or lease) before the proposed control requirements come into force, will be exempt from the emission compliance requirements.

¹ “**Container backup facilities**” means facilities essential to the handling of containers which do not require (but may have) a waterfront location and includes container yards, empty container storage and repair depots, container freight stations and container vehicle parks.

² “**Designated waste disposal facility**” means any designated waste disposal facility as defined in section 2 of the Waste Disposal (Designated Waste Disposal Facility) Regulation, Cap. 354L.

19. Before the proposed control requirements come into force, a grace period will be allowed for NRMM suppliers and operators of the specified activities to notify EPD of the presence of their existing NRMMs with identification particulars (trade name, model, serial number, engine make and model). EPD will keep a record of such NRMMs and require these NRMMs to be affixed with exemption labels at conspicuous positions of the NRMMs for ease of identification. Duly notified existing NRMMs will not be subject to the new emissions control requirements.

20. EPD will standardise the format of the labels for the suppliers or operators to print and display the labels for their NRMMs. For ease of identification, the approval label and the exemption label will be in different colours. Samples of the labels and its requirements are given at **Appendix**.

21. Other users not engaging in specified activities are not required to notify EPD of their existing NRMMs, if these NRMMs are solely used in those activities not specified in the new Regulation.

Offence, Penalty and Enforcement

22. In alignment with other similar offences under the Air Pollution Control Ordinance, the proposed penalty schedule is as follows-

| Offence | Maximum Penalty |
|---|--------------------------------------|
| Selling, leasing or supplying a non-exempted NRMM for local use without a valid approval issued by EPD | \$200,000 and 6 months' imprisonment |
| Using a non-exempted NRMM for a specified activity without a valid approval issued by EPD | \$200,000 and 6 months' imprisonment |
| Violating the conditions imposed in an approval | \$200,000 and 6 months' imprisonment |
| Not affixing an approved NRMM with an approval label according to the labelling requirements specified by EPD | \$50,000 and 3 months' imprisonment |

| | |
|---|-------------------------------------|
| For an existing NRMM possessing EPD's exemption, not affixing an exemption label according to the labelling requirements specified by EPD | \$50,000 and 3 months' imprisonment |
| Provision of false or incorrect information for acquisition of the approval or exemption label, or displaying an approval or exemption label which is false or misleading | \$50,000 and 3 months' imprisonment |

23. EPD will inspect the premises of NRMM suppliers and users to ascertain the notification given for their existing NRMMs. Upon the completion of the labelling of the existing NRMMs, EPD will inspect relevant premises as routine enforcement work to ascertain compliance with the new requirements.

ENVIRONMENTAL BENEFITS

24. Emissions from NRMMs account for about 7% (6,800 tonnes) and 11% (600 tonnes) of the local emissions of nitrogen oxides (NOx) and respirable suspended particulates (RSP) respectively. If all NRMMs in local use are replaced with ones meeting the proposed emission standards, local emissions of NOx and RSP can be reduced by 4.7% (4,500 tonnes) and 9% (500 tonnes) respectively. The environmental nuisance generated at container terminals and construction sites near the urban centres will be reduced.

WAY FORWARD

25. Subject to the views of stakeholders on the revised proposal, our plan is to finalise the proposal and initiate the necessary legislative procedures within 2011.

VIEWS SOUGHT

26. We would like to invite views and comments on the above proposal. Please send us your views and comments on or before 20 July 2011:

By mail: Air Policy Group
Environmental Protection Department
33/F, Revenue Tower
5 Gloucester Road
Wan Chai, Hong Kong

By facsimile: 2838 2155

or

By email: NonRoadConsult@epd.gov.hk

Environment Bureau/Environmental Protection Department
June 2011

Sample of Approval Label and Exemption Label

機械種類 Machine Type :

商標及型號 Trade Name & Model :

序號 Serial Number :

EPD-A-12Z45-20X1

根據《XXXXX 規例》(第 XXX 章) 通過核准

Approval granted under XXXXX Regulation (Cap. XXX)

(Approval label will be printed with green background colour)

機械種類 Machine Type :

商標及型號 Trade Name & Model :

序號 Serial Number :

EPD-E-W23T5-2Y11

根據《XXXXX 規例》(第 XXX 章) 獲得豁免

Exemption granted under XXXXX Regulation (Cap. XXX)

(Exemption label will be printed with yellow background colour)

The labels shall be:

- i. produced and affixed on the NRMMS in the format (including size and colour) as specified by EPD;
- ii. printed with the reference of approval or exemption assigned by EPD on the NRMMS;
- iii. affixed to conspicuous place of the NRMMS; and
- iv. properly maintained to make it clear and legible whenever the NRMMS are in sale, lease or supply for local use and put to use for the specified activities.