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LEGISLATIVE COUNCIL BRIEF

Air Pollution Control Ordinance (Cap. 311)

Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2009

INTRODUCTION

Pursuant to section 43 (1)(p) of the Air Pollution Control Ordinance (Cap. 311), the Secretary for the Environment has, after consultation with the Advisory Council on the Environment, proposed amendments to the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. Leg. L) by subsidiary legislation, namely the Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2009 (hereunder the “Amendment Regulation”) as at **Annex**, to introduce specifications for motor vehicle biodiesel. Pursuant to section 43(3) of the Ordinance, the Amendment Regulation will also impose labelling requirements on motor vehicle biodiesel.

BACKGROUND AND JUSTIFICATIONS

2. Biodiesel is a renewable fuel manufactured from vegetable oils, animal fats, waste cooking oil, etc. Replacing petroleum diesel with biodiesel can help reduce greenhouse gas emissions such as carbon dioxide

and hence avert global warming.

3. Biodiesel can be used to power motor vehicles in pure form or in blends with motor vehicle diesel. Jurisdictions such as the European Union (EU) and the United States of America (USA) are promoting the use of biodiesel as motor vehicle fuel by various tax concessions. By the same token, biodiesel will not attract any duty in Hong Kong. To boost consumer confidence in the fuel and prevent excessive exhaust emissions owing to poor biodiesel quality, it is a common practice to require motor vehicle biodiesel to follow certain international standards such as EN14214.¹

4. Not all diesel vehicles are compatible with biodiesel or its blends with motor vehicle diesel. Vehicle manufacturers generally accept the use of motor vehicle diesel containing up to 5% biodiesel to power their vehicles. A higher biodiesel content may cause incompatibility problems to certain vehicle models. Subject to the advice of vehicle manufacturers, however, the incompatibility problems could be overcome by replacing certain engine components.

5. To enable drivers to decide on the use of biodiesel-containing motor vehicle diesel, EU and USA require labels to be posted at the selling points of such fuel if its biodiesel content exceeds 5%. The label will list the content of biodiesel. The United Kingdom also requires the label to alert drivers to the potential incompatibility problem mentioned in the preceding paragraph.

¹ EN 14214 is the European Standard that describes the minimum requirements for biodiesel. We propose to adopt this as the pure motor vehicle diesel specification in Hong Kong.

THE AMENDMENT REGULATION

6. The Amendment Regulation introduces the following key provisions on regulating motor vehicle biodiesel–

(a) Motor vehicle biodiesel

- (i) pure biodiesel that is supplied or sold for motor vehicle use has to comply with EN 14214; and
- (ii) biodiesel blends that are supplied or sold for motor vehicle use must be blended from pure biodiesel meeting EN 14214 and motor vehicle diesel as stipulated in Schedule 1 of the Regulation.

(b) Labelling requirements

- (i) a label is required for selling the motor vehicle biodiesel with biodiesel content over 5%; and
- (ii) the biodiesel content in the motor vehicle biodiesel expressed in percentage should not be more than 1% higher or lower than the percentage of biodiesel content indicated on the label (For example, a biodiesel with its biodiesel content of 15% specified on the label should have its biodiesel content between 14% and 16%, both inclusive).

LEGISLATIVE TIMETABLE

7. We will publish the Amendment Regulation in the Gazette on 20 November 2009 and table it at the Legislative Council for negative vetting on 25 November 2009. Subject to the negative vetting by the Legislative Council, the Amendment Regulation will take effect starting from 1 July 2010.

BASIC LAW AND HUMAN RIGHTS IMPLICATIONS

8. The Amendment Regulation is in conformity with the Basic Law, including the provisions concerning human rights.

BINDING EFFECT OF THE LEGISLATION

9. The Amendment Regulation will not affect the current binding effect of the Air Pollution Control Ordinance (Cap. 311) and its subsidiary legislation.

FINANCIAL AND STAFF IMPLICATIONS

10. The Amendment Regulation will create additional enforcement workload. Concerned departments will deploy existing resources to enforce the regulatory control on motor vehicle biodiesel.

ECONOMIC IMPLICATIONS

11. The proposal has minimal economic implication to the transport trade and economy at large.

ENVIRONMENTAL AND SUSTAINABILITY IMPLICATIONS

12. Biodiesel is a form of renewable energy. The carbon dioxide emitted during its combustion will be absorbed via photosynthesis by plants producing the feedstock for making biodiesel. The wider use of biodiesel in lieu of fossil diesel, which is non-renewable, is therefore conducive to reducing greenhouse gas emissions and arresting global climate changes owing to the rising greenhouse gas level.

13. In respect of the potential to improve roadside air quality, Euro V diesel and biodiesel are similar.

14. The proposal is in line with the sustainability principles of seeking to find opportunities to enhance environmental quality, and promoting the use of renewable resources.

CONSULTATION

15. Biodiesel suppliers, the oil companies, and The Motor Traders Association of Hong Kong, which represents all the major suppliers of local diesel vehicles, have no objection to the proposed regulatory control on

motor vehicle biodiesel.

16. We consulted the Legislative Council Panel on Environmental Affairs on 25 May 2009 and the Advisory Council on the Environment on 8 June 2009. Both had no objection to the proposal.

PUBLICITY

17. We will issue a press release and inform the relevant trades when the Amendment Regulation is published in the Gazette.

ENQUIRIES

18. For any enquiries, please contact Mr. H N LAU, Senior Environmental Protection Officer (Mobile Source), at 2594 6360.

Environmental Protection Department

November 2009

Annex

**Air Pollution Control (Motor Vehicle Fuel)
(Amendment) Regulation 2009**

**AIR POLLUTION CONTROL (MOTOR VEHICLE FUEL)
(AMENDMENT) REGULATION 2009**

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PART V

MOTOR VEHICLE BIODIESEL

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AIR POLLUTION CONTROL (MOTOR VEHICLE FUEL) (AMENDMENT) REGULATION 2009

(Made by the Secretary for the Environment under section 43 of the Air Pollution Control Ordinance (Cap. 311) after consultation with the Advisory Council on the Environment)

1. Commencement

This Regulation comes into operation on 1 July 2010.

2. Interpretation

Section 2 of the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L) is amended by adding –

““biodiesel” (生化柴油) means a fuel comprising mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats;

“ester content” (酯含量) means the content of fatty acid methyl ester in a fuel determined by –

(a) if the fuel is pure motor vehicle biodiesel, the test procedure of the European Standards commonly known as EN 14103:2003; or

(b) if the fuel is motor vehicle biodiesel blend, the test procedure of the European Standards commonly known as EN 14078:2003;

“motor vehicle biodiesel” (汽車生化柴油) means pure motor vehicle biodiesel or motor vehicle biodiesel blend;

“motor vehicle biodiesel blend” (汽車生化柴油混合物) means a motor vehicle fuel that must be blended only from pure motor vehicle biodiesel and motor vehicle diesel;

“motor vehicle biodiesel dispenser” (汽車生化柴油加油機) means an installation used or intended to be used for dispensing motor vehicle biodiesel into the fuel tank of a motor vehicle (whether or

not also for dispensing motor vehicle biodiesel into any other container);

“motor vehicle biodiesel label” (汽車生化柴油標籤) means a label that complies with the specifications as specified in Schedule 4;

“motor vehicle biodiesel retailer” (汽車生化柴油零售商) means a person who sells, or offers for sale, motor vehicle biodiesel by retail to the public at large for use in motor vehicles;

“motor vehicle biodiesel supplier” (汽車生化柴油供應商) means a person who, in the course of business, supplies or distributes motor vehicle biodiesel but does not include a motor vehicle biodiesel retailer;

“motor vehicle fuel” (汽車燃料) means any fuel that is used in the propulsion of a motor vehicle;

“pure motor vehicle biodiesel” (純汽車生化柴油) means any motor vehicle fuel that complies with the specifications as specified in Schedule 3;”.

3. Supplying or selling leaded petrol

(1) Section 3(3) is amended by repealing “until the contrary is proved” and substituting “unless there is evidence to the contrary”.

(2) Section 3(4) is amended by repealing “until the contrary is proved” and substituting “unless there is evidence to the contrary”.

4. Supplying or selling fuel additives containing lead

(1) Section 8(3) is amended by repealing “until the contrary is proved” and substituting “unless there is evidence to the contrary”.

(2) Section 8(4) is amended by repealing “until the contrary is proved” and substituting “unless there is evidence to the contrary”.

5. Dispensing of fuel additives containing lead

Section 9(2) is amended by repealing “until the contrary is proved” and substituting “unless there is evidence to the contrary”.

6. Part V added

The following is added –

“PART V

MOTOR VEHICLE BIODIESEL

10. Supplying or selling motor vehicle biodiesel

(1) Any motor vehicle biodiesel supplier who knowingly supplies or distributes any substance (that is not motor vehicle biodiesel) as motor vehicle biodiesel commits an offence and is liable to a fine at level 5.

(2) Subject to subsection (5), any motor vehicle biodiesel retailer who knowingly sells or offers for sale any substance (that is not motor vehicle biodiesel) as motor vehicle biodiesel commits an offence and is liable to a fine at level 5.

(3) For the purposes of any proceedings under subsection (1), the person charged is, unless there is evidence to the contrary, presumed to have known that the substance the person supplied or distributed was not motor vehicle biodiesel.

(4) For the purposes of any proceedings under subsection (2), the person charged is, unless there is evidence to the contrary, presumed to have known that the substance the person sold or offered for sale was not motor vehicle biodiesel.

(5) A motor vehicle biodiesel retailer does not commit an offence under subsection (2) if the retailer proves that –

- (a) he or she purchased, or otherwise obtained, the substance with a warranty or other written

evidence from the motor vehicle biodiesel supplier who supplied or distributed the substance that the substance was motor vehicle biodiesel; and

- (b) at the time of the alleged offence, the substance was in the same state as it was in at the time of delivery to him or her.

11. Requirement to carry label for supplying or selling motor vehicle biodiesel

(1) Any person who knowingly supplies, distributes, sells or offers for sale any motor vehicle biodiesel containing an ester content over 5% through a motor vehicle biodiesel dispenser must display prominently on the dispenser a motor vehicle biodiesel label.

(2) A person who fails to comply with subsection (1) commits an offence and is liable to a fine at level 5.

(3) Any person who knowingly supplies, distributes, sells or offers for sale any motor vehicle biodiesel containing an ester content over 5% in any container other than a motor vehicle biodiesel dispenser must ensure that a motor vehicle biodiesel label that complies with the requirements specified in subsection (4) is securely affixed to or printed on the container.

(4) The requirements mentioned in subsection (3) are the following –

- (a) if the container is in the form of a packet, the label must appear on one of the largest surfaces of the packet and the size of the label must be proportionally scaled so that it covers at least 40% of the area of the surface on which it appears;

- (b) if the container is in the form of a tin or drum, the label must appear on the curved surface of the tin or drum and the size of the label must be proportionally scaled so that it covers at least 20% of the area of the curved surface on which it appears; or
- (c) if the container is in any other form, the size of the label must be proportionally scaled so that it covers at least 40% of the area of the surface on which it appears.

(5) A person who fails to comply with subsection (3) commits an offence and is liable to a fine at level 5.

(6) For the purposes of any proceedings under subsection (2) or (5), the person charged is, unless there is evidence to the contrary, presumed to have known the ester content of the motor vehicle biodiesel that the person supplied, distributed, sold or offered for sale.

12. Requirement as to statement of ester content on motor vehicle biodiesel label

(1) Any motor vehicle biodiesel supplier who knowingly supplies or distributes any motor vehicle biodiesel containing an ester content that is more than 1% higher or lower than the percentage of ester content as indicated on the motor vehicle biodiesel label commits an offence and is liable to a fine at level 5.

(2) Subject to subsection (5), any motor vehicle biodiesel retailer who knowingly sells or offers for sale any motor vehicle biodiesel containing an ester content that is more than 1% higher or lower than the percentage of ester content as indicated on the motor vehicle biodiesel label commits an offence and is liable to a fine at level 5.

(3) For the purposes of any proceedings under subsection (1), the person charged is, unless there is evidence to the contrary, presumed to

have known the ester content of the motor vehicle biodiesel that the person supplied or distributed.

(4) For the purposes of any proceedings under subsection (2), the person charged is, unless there is evidence to the contrary, presumed to have known the ester content of the motor vehicle biodiesel that the person sold or offered for sale.

(5) A motor vehicle biodiesel retailer does not commit an offence under subsection (2) if the retailer proves that –

- (a) he or she purchased, or otherwise obtained, the motor vehicle biodiesel with a warranty or other written evidence from the motor vehicle biodiesel supplier who supplied or distributed the motor vehicle biodiesel that the motor vehicle biodiesel contained an ester content of the percentage as indicated on the motor vehicle biodiesel label; and
- (b) at the time of the alleged offence, the motor vehicle biodiesel was in the same state as it was in at the time of delivery to him or her.”.

7. **Schedules 3 and 4 added**

The following are added –

“SCHEDULE 3

[s. 2]

SPECIFICATIONS OF PURE MOTOR VEHICLE BIODIESEL

Any pure motor vehicle biodiesel must –

- (a) contain not less than 96.5% by mass of fatty acid methyl ester as determined by EN 14103:2003 (the addition of components that are not fatty acid methyl ester, other than an additive, is not allowed);

- (b) have a density at 15°C of not lower than 860 kg/m³ and not higher than 900 kg/m³ as determined by EN ISO 3675:1998;
- (c) have a viscosity at 40°C of not lower than 3.50 mm²/s and not higher than 5.00 mm²/s as determined by EN ISO 3104:1996;
- (d) have a flash point of above 101°C as determined by EN ISO 3679:2004;
- (e) contain not more than 10.0 mg/kg of sulphur as determined by EN ISO 20884:2004;
- (f) contain not more than 0.30% by mass of carbon residue (on 10% distillation residue) as determined by EN ISO 10370:1995;
- (g) have a cetane number of not less than 51.0 as determined by EN ISO 5165:1998;
- (h) contain not more than 0.02% by mass of sulphated ash as determined by ISO 3987:1994;
- (i) contain not more than 500 mg/kg of water as determined by EN ISO 12937:2000;
- (j) contain not more than 24 mg/kg of total contamination as determined by EN 12662:2008;
- (k) have a copper strip corrosion (for 3 hours at 50°C) rating of Class 1 as determined by EN ISO 2160:1998;
- (l) have an oxidation stability at 110°C of not lower than 6 hours as determined by EN 14112:2003;
- (m) have an acid value of not more than 0.50 mg KOH/g as determined by EN 14104:2003;
- (n) have an iodine value of not more than 120 g iodine/100 g as determined by EN 14111:2003;

- (o) contain not more than 12.0% by mass of linolenic acid methyl ester as determined by EN 14103:2003;
- (p) contain not more than 1% by mass of polyunsaturated (greater than or equal to 4 double bonds) methyl esters;
- (q) contain not more than 0.20% by mass of methanol content as determined by EN 14110:2003;
- (r) contain not more than 0.80% by mass of monoglyceride content as determined by EN 14105:2003;
- (s) contain not more than 0.20% by mass of diglyceride content as determined by EN 14105:2003;
- (t) contain not more than 0.20% by mass of triglyceride content as determined by EN 14105:2003;
- (u) contain not more than 0.02% by mass of free glycerol as determined by EN 14105:2003;
- (v) contain not more than 0.25% by mass of total glycerol as determined by EN 14105:2003;
- (w) contain not more than 5.0 mg/kg of Group I metals (sodium plus potassium) as determined by EN 14538:2006;
- (x) contain not more than 5.0 mg/kg of Group II metals (calcium plus magnesium) as determined by EN 14538:2006; and
- (y) contain not more than 4.0 mg/kg of phosphorus content as determined by EN 14107:2003.

Note: In this Schedule –

“EN” followed by a numerical symbol (“EN number”) means the test procedures of the European Standards commonly known by that EN number;

“ISO” followed by a numerical symbol (“ISO number”) means the test procedures of the International Organization for Standardization commonly known by that ISO number.

SCHEDULE 4

[s. 2]

SPECIFICATIONS OF MOTOR VEHICLE BIODIESEL LABEL

1. The design of the label must be as specified in the diagram below –

<p>汽車生化柴油 Motor Vehicle Biodiesel</p> <p>本(i)的酯含量為(ii)%* This (iii) contains (iv)% of ester content*</p> <p>不適合某些車輛 Not suitable for some vehicles 使用前請諮詢有關的認可車輛代理商 Consult the relevant authorized vehicle dealers before use</p> <p>本汽車生化柴油為《空氣污染管制（汽車燃料）規例》（第311章，附屬法例L）所指的汽車生化柴油。 This motor vehicle biodiesel is the motor vehicle biodiesel within the meaning of the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L).</p> <p>* 實際酯含量與本標籤所示的含量，相差不多於1%。 * The actual ester content does not deviate by more than 1% from the content shown on this label.</p>
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2. The label must be rectangular in shape and must have a minimum size of 60 cm wide and 45 cm high and surrounded by a black line as demarcation.
3. The background colour of the label must be yellow.

4. For the Chinese text, all characters and numbers, except otherwise specified in paragraph 6 below, must be printed in black, “標楷體” Bold typeface and 24 mm high font size.
5. For the English text, all letters and numbers must be printed in black, Arial typeface and 25 mm high font size.
6. The characters “不適合某些車輛” and “使用前請諮詢有關的認可車輛代理商” must be printed in red, “標楷體” Bold typeface and 24 mm high font size.
7. The spaces marked by (i) and (iii) must be printed with –
 - (a) if the motor vehicle biodiesel is pure motor vehicle biodiesel, the characters “純汽車生化柴油” and the letters “pure motor vehicle biodiesel” respectively; or
 - (b) if the motor vehicle biodiesel is motor vehicle biodiesel blend, the characters “汽車生化柴油混合物” and the letters “motor vehicle biodiesel blend” respectively.
8. The spaces marked by (ii) and (iv) must be printed with a number representing the proportion in percentage of the ester content in the motor vehicle biodiesel determined by –
 - (a) if the motor vehicle biodiesel is pure motor vehicle biodiesel, the test procedure of the European Standards commonly known as EN 14103:2003; or
 - (b) if the motor vehicle biodiesel is motor vehicle biodiesel blend, the test procedure of the European Standards commonly known as EN 14078:2003.”.

A handwritten signature in black ink, appearing to read "Howard F. ...", is written over a faint, larger version of the same signature.

Secretary for the Environment

12 November 2009

Explanatory Note

This Regulation amends the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L) ("the principal Regulation"). The main purpose is to provide for the specifications of biodiesel used as motor vehicle fuel so as to prevent adverse impact on the environment resulting from the use of substandard biodiesel for motor vehicles.

2. Section 2 provides for the definitions newly added.
3. Sections 3 to 5 amend sections 3, 8 and 9 of the principal Regulation respectively to make clear that the relevant provisions only impose an evidential burden on a person charged.
4. Section 6 adds to the principal Regulation a new Part V which provides for the regulatory control on the supply and sale of motor vehicle biodiesel and the labelling requirements.
5. Section 7 adds to the principal Regulation new Schedules 3 and 4. The new Schedule 3 sets out the specifications of the pure motor vehicle biodiesel while the new Schedule 4 sets out the specifications of the motor vehicle biodiesel label.