

LEGISLATIVE COUNCIL BRIEF

Air Pollution Control Ordinance (Cap. 311)

Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2010

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 2010 (hereunder the “Amendment Regulation”) as at **Annex**, to tighten the specifications of motor vehicle diesel and unleaded petrol to Euro V standards.

BACKGROUND AND JUSTIFICATIONS

2. To reduce the emissions from motor vehicles, it is the Administration’s established policy to adopt the most stringent requirements for the emissions of newly registered vehicles and the quality of motor vehicle fuel as soon as they are practicable and can be made available to Hong Kong. We have thus been monitoring the relevant international

developments with a view to tightening our emission and fuel standards progressively.

3. We had tightened the specifications of motor vehicle diesel and unleaded petrol to Euro IV standards in 2002 and 2005 respectively. To further reduce vehicle emissions, the European Union (EU) has implemented Euro V standard for motor vehicle fuel (both diesel and petrol) since January 2009. The major difference between Euro IV and Euro V motor vehicle fuels (i.e. for both diesel and petrol) is the tightening of the cap on sulphur content from 0.005% to 0.001%.

4. To encourage the early import of Euro V diesel and promote its use locally for better roadside air quality, we introduced a concessionary fuel duty for it in December 2007 and have reduced its fuel duty to zero since July 2008. Euro V diesel is now being offered exclusively for diesel vehicles at all local petrol filling stations. As for petrol, according to our record, the import volume of petrol meeting the tightened sulphur requirement of Euro V standard increased from 10% in 2008 to about 50% in 2009, indicating that Euro V petrol has gradually become more widely available.

THE AMENDMENT REGULATION

5. The specifications of motor vehicle diesel and unleaded petrol are set out in Schedule 1 and Schedule 2 to the Air Pollution Control (Motor Vehicle Fuel) Regulation respectively. To tighten the specifications of motor vehicle diesel and unleaded petrol for the purposes aforesaid, it is

proposed to replace the existing Schedule 1 by a new Schedule 1 and replace the existing Schedule 2 by a new Schedule 2.

LEGISLATIVE TIMETABLE

6. We will publish the Amendment Regulation in the Gazette on 7 May 2010 and table it at the Legislative Council for negative vetting on 12 May 2010. Subject to negative vetting by the Legislative Council, the Amendment Regulation will take effect starting from 1 July 2010.

IMPLICATIONS OF THE PROPOSAL

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

8. 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

9. The proposal will not create additional enforcement workload and the control on Euro V fuel specifications will be met through re-deployment of existing resources within the concerned departments.

ECONOMIC IMPLICATIONS

10. Currently diesel sold in local petrol filling stations has all met Euro V standard. As most commercial vehicles are powered by diesel, the proposal will have minimal impact on the operating costs of the transportation sector. As for petrol, some suppliers estimate that the price of Euro V petrol will be higher by at most 20 cents per litre though the price will ultimately be determined by the supply of and demand for the fuel. Given the very small weighting of petrol in the Consumer Price Indices, the proposal will not have any significant impact on inflation.

ENVIRONMETAL IMPLICATIONS

11. Euro V motor vehicle fuel helps reduce about 80% sulphur dioxide from motor vehicles. It also helps improve the removal efficiency of the emission control system installed in the motor vehicles and facilitates the introduction of more advanced emission control systems to reduce motor vehicle emissions. If the existing petrol vehicles use Euro V petrol, their emissions of carbon monoxide, nitrogen oxides and hydrocarbons will be reduced by about 10 %. As compared with Euro IV diesel, Euro V diesel will also help reduce the respirable suspended particulates of the existing diesel vehicles by 5%.

SUSTAINABILITY IMPLICATIONS

12. The proposal is conducive to reducing emissions from motor

vehicles, thus helping to improve roadside air pollution. It is in line with the sustainability principles of seeking to find opportunities to enhance environmental quality.

CONSULTATION

13. The oil companies and The Motor Traders Association of Hong Kong have no objection to the proposal. The oil companies have confirmed that they could provide unleaded petrol and motor vehicle diesel meeting the proposed specifications.

14. We consulted the Advisory Council on the Environment and the Panel of Environmental Affairs of the Legislative Council in November 2009. Both had no objection to the proposal.

PUBLICITY

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

ENQUIRIES

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

Environmental Protection Department

May 2010

Annex

Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2010

**AIR POLLUTION CONTROL (MOTOR VEHICLE FUEL)
(AMENDMENT) REGULATION 2010**

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AIR POLLUTION CONTROL (MOTOR VEHICLE FUEL) (AMENDMENT) REGULATION 2010

(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

(1) Section 2 of the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L) as amended by the Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2009 (L.N. 233 of 2009) (that Regulation as so amended is referred to in this Regulation as “Principal Regulation”) is amended, in the definition of “cetane number”, by repealing everything after “diesel” and substituting “as determined in accordance with the document published by the European Committee for Standardization commonly known as EN ISO 5165:1998;”.

(2) Section 2 of the Principal Regulation is amended by repealing the definition of “ester content” and substituting –

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

- (a) if the fuel is pure motor vehicle biodiesel, the document published by the European Committee for Standardization commonly known as EN 14103:2003; or
- (b) if the fuel is motor vehicle biodiesel blend, the document published by the European Committee for Standardization commonly known as EN 14078:2003;”.

(3) Section 2 of the Principal Regulation is amended, in the definition of “motor octane number”, by repealing everything after “petrol” and substituting “as determined in accordance with the document published by the European Committee for Standardization commonly known as EN ISO 5163:2005;”.

(4) Section 2 of the Principal Regulation is amended, in the definition of “research octane number”, by repealing everything after “petrol” and substituting “as determined in accordance with the document published by the European Committee for Standardization commonly known as EN ISO 5164:2005;”.

3. Supplying or selling leaded petrol

Section 3(5)(a) of the Principal Regulation is amended by repealing “he purchased, or otherwise obtained, the petrol with a warranty or other written evidence from a petrol supplier” and substituting “the retailer purchased, or otherwise obtained, the petrol with a warranty or other written evidence from the petrol supplier who supplied or distributed the petrol”.

4. Supplying or selling motor vehicle diesel

(1) Section 7(2) of the Principal Regulation is amended by repealing everything after “for sale” and substituting “any substance (which is not motor vehicle diesel) as motor vehicle diesel commits an offence and is liable to a fine at level 5.”.

(2) Section 7 of the Principal Regulation is amended by adding –

“(2A) 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 diesel.

(2B) 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 diesel.”.

(3) Section 7(3) of the Principal Regulation is amended by repealing “subsection (2)(a) or (b) if he proves” and substituting “subsection (2) if the retailer proves”.

(4) Section 7(3)(a) of the Principal Regulation is amended by repealing “he purchased, or otherwise obtained, the diesel or other substance with a warranty or other written evidence from a motor vehicle diesel supplier that the diesel or other substance” and substituting “the retailer purchased, or otherwise obtained, the substance with a warranty or other written evidence from the motor vehicle diesel supplier who supplied or distributed the substance that the substance”.

(5) Section 7(3)(b) of the Principal Regulation is amended by repealing “diesel or other substance was in the same state that it was in at the time of delivery to him” and substituting “substance was in the same state that it was in at the time of delivery to the retailer”.

5. Supplying or selling fuel additives containing lead

Section 8(5)(a) of the Principal Regulation is amended by adding “or distributed” after “supplied”.

6. Dispensing of fuel additives containing lead

Section 9(3)(a) of the Principal Regulation is amended by adding “or distributed” after “supplied”.

7. Schedules 1 and 2 substituted

Schedules 1 and 2 to the Principal Regulation are repealed and the following substituted –

“SCHEDULE 1

[s. 2]

SPECIFICATIONS OF MOTOR VEHICLE DIESEL

Any motor vehicle diesel must –

- (a) have a cetane number of not less than 51.0, as determined in accordance with EN ISO 5165:1998;
- (b) have a cetane index of not lower than 46.0, as determined in accordance with EN ISO 4264:2007;
- (c) have a density at 15°C of not lower than 820.0 kg/m³ and not higher than 845.0 kg/m³, as determined in accordance with EN ISO 3675:1998;
- (d) contain not more than 11% by mass of polycyclic aromatic hydrocarbons, as determined in accordance with EN 12916:2006;
- (e) contain not more than 10.0 mg/kg of sulphur, as determined in accordance with EN ISO 20884:2004;
- (f) have a flash point of above 55°C, as determined in accordance with EN ISO 2719:2002;
- (g) contain not more than 0.30% by mass of carbon residue (on 10% distillation residue), as determined in accordance with EN ISO 10370:1995;
- (h) contain not more than 0.01% by mass of ash, as determined in accordance with EN ISO 6245:2002;
- (i) contain not more than 200 mg/kg of water content, as determined in accordance with EN ISO 12937:2000;
- (j) contain not more than 24 mg/kg of total contamination, as determined in accordance with EN 12662:2008;

- (k) have a copper strip corrosion (3 hours at 50°C) rating of Class 1, as determined in accordance with EN ISO 2160:1998;
- (l) have an oxidation stability of not higher than 25 g/m³, as determined in accordance with EN ISO 12205:1996;
- (m) have a lubricity, corrected wear scar diameter (wsd 1.4) at 60°C, of not higher than 460 µm, as determined in accordance with EN ISO 12156-1:2006;
- (n) have a viscosity at 40°C of not lower than 2.00 mm²/s and not higher than 4.50 mm²/s, as determined in accordance with EN ISO 3104:1996;
- (o) have a distillation percentage recovered at 250°C of lower than 65% by volume, as determined in accordance with EN ISO 3405:2000;
- (p) have a distillation percentage recovered at 350°C of not lower than 85% by volume, as determined in accordance with EN ISO 3405:2000;
- (q) have a distillation percentage recovered at not higher than 360°C of 95% by volume, as determined in accordance with EN ISO 3405:2000; and
- (r) contain an ester content of not more than 5%, as determined in accordance with EN 14078:2003.

Note: In this Schedule –

“EN” followed by a numerical symbol (“EN number”) means the document published by the European Committee for Standardization commonly known by that EN number;

“EN ISO” followed by a numerical symbol (“EN ISO number”) means the document published by the European Committee

for Standardization commonly known by that EN ISO number.

SCHEDULE 2

[s. 2]

SPECIFICATIONS OF UNLEADED PETROL

Any unleaded petrol must –

- (a) have a research octane number of not less than 95.0, as determined in accordance with EN ISO 5164:2005;
- (b) have a motor octane number of not less than 85.0, as determined in accordance with EN ISO 5163:2005;
- (c) contain not more than 5.0 mg/L of lead, as determined in accordance with EN 237:2004;
- (d) contain not more than 10.0 mg/kg of sulphur, as determined in accordance with EN ISO 20884:2004;
- (e) have an oxidation stability of not lower than 360 minutes, as determined in accordance with EN ISO 7536:1996;
- (f) have an existent gum content (solvent washed) of not higher than 5 mg/100 ml, as determined in accordance with EN ISO 6246:1997;
- (g) have a copper strip corrosion (3 hours at 50°C) rating of Class 1, as determined in accordance with EN ISO 2160:1998;
- (h) have a clear and bright appearance as determined by visual inspection;
- (i) contain not more than 18.0% by volume of olefins, as determined in accordance with EN 14517:2004;

- (j) contain not more than 35.0% by volume of aromatic hydrocarbons, as determined in accordance with EN 14517:2004;
- (k) contain not more than 1.00% by volume of benzene content, as determined in accordance with EN 12177:1998;
- (l) contain not more than 2.7% by mass of oxygen content, as determined in accordance with EN 1601:1997;
- (m) contain not more than 3.0% by volume of methanol (stabilizing agents must be added), as determined in accordance with EN 1601:1997;
- (n) contain not more than 5.0% by volume of ethanol (stabilizing agents may be necessary), as determined in accordance with EN 1601:1997;
- (o) contain not more than 10.0% by volume of iso-propyl alcohol, as determined in accordance with EN 1601:1997;
- (p) contain not more than 10.0% by volume of iso-butyl alcohol, as determined in accordance with EN 1601:1997;
- (q) contain not more than 7.0% by volume of tert-butyl alcohol, as determined in accordance with EN 1601:1997;
- (r) contain not more than 15.0% by volume of ethers (containing 5 or more carbon atoms per molecule), as determined in accordance with EN 1601:1997;
- (s) contain not more than 10.0% by volume of other oxygenates with a final boiling point not higher than 210°C, as determined in accordance with EN 1601:1997;
- (t) have a vapour pressure (dry vapour pressure equivalent) of not higher than 60.0 kilopascal at 37.8°C, as determined in accordance with EN 13016-1:2007;
- (u) have not less than 46.0% by volume evaporated at 100°C, as determined in accordance with EN ISO 3405:2000; and

- (v) have not less than 75.0% by volume evaporated at 150°C, as determined in accordance with EN ISO 3405:2000.

Note: In this Schedule –

“EN” followed by a numerical symbol (“EN number”) means the document published by the European Committee for Standardization commonly known by that EN number;

“EN ISO” followed by a numerical symbol (“EN ISO number”) means the document published by the European Committee for Standardization commonly known by that EN ISO number;

“other oxygenates” as appearing in paragraph (s) means mono-alcohols and ethers other than those specified in paragraphs (m) to (r).”.

8. Specifications of pure motor vehicle biodiesel

(1) Schedule 3 to the Principal Regulation is amended, in paragraph (a), by repealing “as determined by” and substituting “, as determined in accordance with”.

(2) Schedule 3 to the Principal Regulation is amended, in paragraph (a), by repealing “(the addition of components that are not fatty acid methyl ester, other than an additive, is not allowed)”.

(3) Schedule 3 to the Principal Regulation is amended, in paragraphs (b) to (o) and (q) to (w), by repealing “as determined by” and substituting “, as determined in accordance with”.

(4) Schedule 3 to the Principal Regulation is amended, in paragraph (x), by repealing “as determined by” and substituting “, as determined in accordance with”.

(5) Schedule 3 to the Principal Regulation is amended, in paragraph (x), by repealing “and”.

(6) Schedule 3 to the Principal Regulation is amended, in paragraph (y), by repealing “as determined by” and substituting “, as determined in accordance with”.

(7) Schedule 3 to the Principal Regulation is amended, in paragraph (y), by repealing the full stop at the end and substituting “; and”.

(8) Schedule 3 to the Principal Regulation is amended by adding –

“(z) contain no substance other than those specified in the preceding paragraphs (unless the substance is an additive).”.

(9) Schedule 3 to the Principal Regulation is amended, in the note, by repealing everything after “In this” and substituting –

“Schedule –

“EN” followed by a numerical symbol (“EN number”) means the document published by the European Committee for Standardization commonly known by that EN number;

“EN ISO” followed by a numerical symbol (“EN ISO number”) means the document published by the European Committee for Standardization commonly known by that EN ISO number;

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

9. Specifications of motor vehicle biodiesel label

(1) Schedule 4 to the Principal Regulation is amended, in the English text, in paragraph 8, by repealing “determined by” and substituting “as determined in accordance with”.

(2) Schedule 4 to the Principal Regulation is amended, in paragraph 8(a), by repealing “test procedure of the European Standards” and substituting “document published by the European Committee for Standardization”.

(3) Schedule 4 to the Principal Regulation is amended, in paragraph 8(b), by repealing “test procedure of the European Standards” and substituting “document published by the European Committee for Standardization”.

10. Technical amendments

The provisions of the Principal Regulation specified in column 2 of the Schedule are amended as set out in column 3 of the Schedule.

SCHEDULE

[s. 10]

Column 1	Column 2	Column 3
Item	Provisions of the Principal Regulation	Amendments
1.	Section 3(3)	Repeal “he” and substitute “the supplier”.
2.	Section 3(4)	Repeal “he” and substitute “the retailer”.
3.	Section 3(5)	In the English text, repeal “if he proves” and substitute “if the retailer proves”.
4.	Section 3(5)(b)	Repeal “him” and substitute “the retailer”.
5.	Section 5(1)	In the English text, repeal “his” and substitute “the retailer’s”.
6.	Section 8(3)	Repeal “he” and substitute “the

- person”.
7. Section 8(4) Repeal “he” and substitute “the person”.
 8. Section 8(5) In the English text, repeal “if he proves” and substitute “if the person proves”.
 9. Section 8(5)(a)
 - (a) In the English text, repeal “he” and substitute “the person”.
 - (b) In the English text, repeal “from the person” and substitute “from another person”.
 10. Section 8(5)(b) Repeal “him” and substitute “the person”.
 11. Section 9(2) Repeal “he” and substitute “the person”.
 12. Section 9(3) In the English text, repeal “if he proves” and substitute “if the person proves”.
 13. Section 9(3)(a)
 - (a) In the English text, repeal “he” and

- substitute "the person".
- (b) In the English text,
repeal "from the
person" and substitute
"from another person".
14. Section 9(3)(b) Repeal "him" and substitute
"the person".
15. Section 10(5)(a) Repeal "he or she" and
substitute "the retailer".
16. Section 10(5)(b) Repeal "him or her" and
substitute "the retailer".
17. Section 12(5)(a) Repeal "he or she" and
substitute "the retailer".
18. Section 12(5)(b) Repeal "him or her" and
substitute "the retailer".



Secretary for the Environment

30 April 2010

Explanatory Note

This Regulation amends the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L) as amended by the Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2009 (L.N. 233 of 2009) (that Regulation as so amended is referred to as “Principal Regulation”). The main purpose is to tighten, from 1 July 2010, the standards of motor vehicle diesel and unleaded petrol to make them in line with the Euro V standards.

2. Sections 2, 3, 4(1), (3), (4) and (5), 5, 6, 8 and 9 make technical amendments to sections 2, 3(5)(a), 7(2) and (3), 8(5)(a) and 9(3)(a) of, and Schedules 3 and 4 to, the Principal Regulation. The amendments seek to make the latter provisions align with the other provisions of the Principal Regulation and update references to technical documents in accordance with which certain technical data are determined.

3. Section 4(2) inserts in the Principal Regulation new section 7(2A) and (2B) under which a person charged with an offence of supplying, distributing, selling or offering for sale, as motor vehicle diesel, a substance that is not, the person is presumed, in the absence of evidence to the contrary, to have known that the substance was not motor vehicle diesel.

4. Section 7 replaces the existing Schedules 1 and 2 to the Principal Regulation with the new ones so as to tighten the standards of motor vehicle diesel and unleaded petrol, making them in line with the Euro V standards.

5. Section 10 makes technical amendments to certain provisions in the Principal Regulation by applying a gender-neutral drafting approach.