



The Promotion of Biofuels in Transportation Sector Hong Kong, China

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Energy Efficiency Office, EMSD
Hong Kong SAR Government
Hong Kong, China



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Transportation Sector in Hong Kong, China



- **Wide use of mass transportation system at the community level**
- **Low car ownership rate compare with other cities like London, Tokyo, and New York**
- **As at end December 2013, Motor Vehicles per 1000 Population was 94.3**
- **Almost all motor vehicles in Hong Kong rely on fossil fuels, including petrol, diesel and LPG**

Transportation Sector in Hong Kong, China



- **Number of Licensed Vehicle by Fuel as in December 2013:**

Fuel	Licensed
Petrol	515,948
Diesel	136,328
Electric	515
LP Gas	21,776
Others ⁽¹⁾	42
Total:	674,609 ⁽²⁾

Note 1: Including various vehicles with power plants such as turbine engines, fuel cell vehicles, etc. of which fuel types cannot be further classified

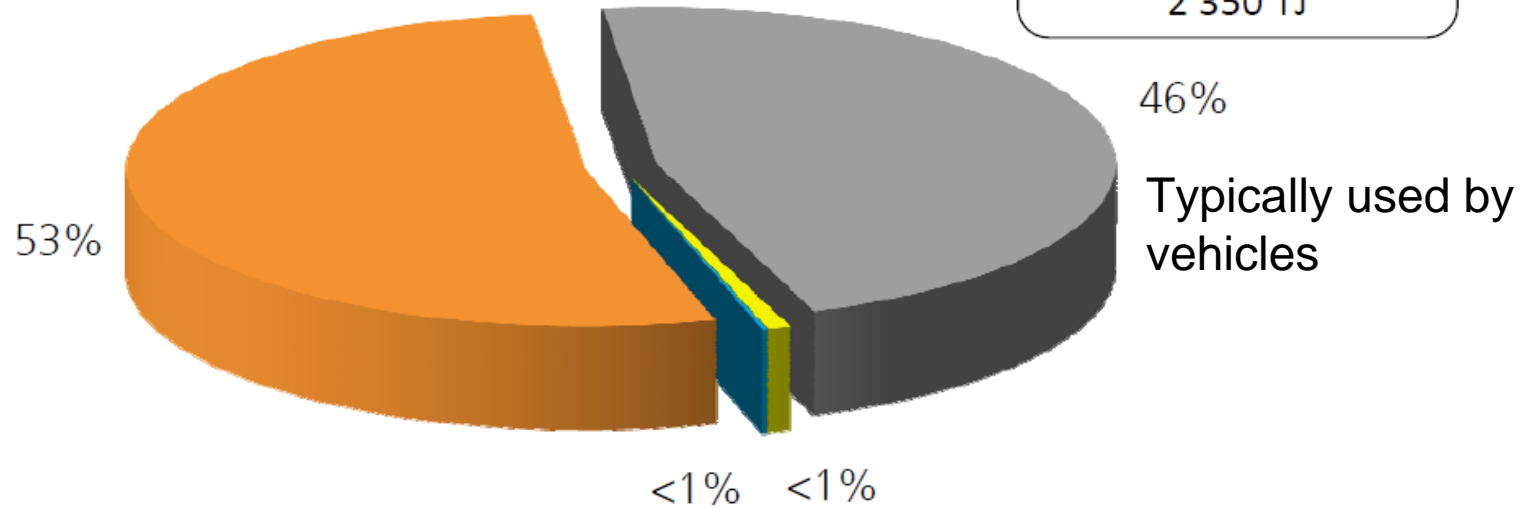
Note 2: Excluding Government vehicles

Energy End Use of RE of Hong Kong, China



年份 Year 2011

再生能源
Renewable Energy
2 350 TJ



■ 太陽能
Solar Energy

■ 風能
Wind Energy

■ 生物氣體
Biogas

■ 生物柴油
Bio-diesel



Biodiesel in Hong Kong, China

- **Three local biodiesel manufacturers**
- **Production capacity of the three biodiesel production plants are 22,000 tons, 100,000 tons and 100,000 tons per annum**
- **Transforming waste cooking oil and grease trap oil to biodiesel**
- **Users of biodiesel include on road vehicles, power generators, tractors, and forklift etc.**

Biodiesel in Hong Kong, China (Cont')



- **Waste cooking oil are collected at the West Kowloon Transfer Station each day for transforming into biodiesel**
 - About 4 – 5 tonnes of used cooking oil
 - About 20 tonnes of recycled fats (recovered oil and grease from the Grease Trap Waste Treatment Facilities at the West Kowloon Transfer Station)



The West Kowloon Transfer Station



Promotion of Biodiesel for Transport Sector

- **“Feasibility Study of Using Biodiesel as Motor Fuel in Hong Kong carried” out by the Government in 2003**
 - Carried out by Environmental Protection Department and The University of Hong Kong
 - Investigate the effect of using different percentages of biodiesel fuel on air pollution emissions, smoke opacity and engine power in diesel vehicles in Hong Kong
 - Serve as a reference for assessing the impact of using biodiesel under Hong Kong diesel vehicle operation environment



Promotion of Biodiesel for Transport Sector

- **Commitment to a duty-free policy on auto-biodiesel**
 - Pure biodiesel is duty-free
 - As an illustration, the duty payable for hydrocarbon oil are as follows

Hydrocarbon Oil	Duty per litre (HK\$)
Aircraft Spirit	\$6.51
Motor Spirit (leaded petrol)	\$6.82
Motor Spirit (unleaded petrol)	\$6.06
Light Diesel Oil	\$2.89
Ultra Low Sulphur Diesel	\$2.89
Euro V Diesel	\$0.00



Promotion of Biodiesel for Transport Sector

- **Specifications for auto-biodiesel under Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap 311L)**
 - The Cap 311L was amended in 2009 to draw up the biodiesel standard applicable to local motor vehicles, so as to ensure the quality of biodiesel
 - The specifications are in general comparable with European Union standard EN14214
 - Biodiesel blends that are supplied or sold for motor vehicle use must be blended from pure biodiesel and motor vehicle diesel

Promotion of Biodiesel for Transport Sector



- **Mandatory labelling requirement at selling points of motor vehicle diesel having biodiesel content over 5%**
 - A label is required at the selling points for selling the motor vehicle biodiesel with biodiesel content over 5%
 - The label is to assist owners in choosing a fuel suitable for their vehicle
 - The biodiesel content in the motor vehicle biodiesel expressed in percentage should not deviate from the percentage of biodiesel content indicated on the label by more than one percent



Promotion of Biodiesel for Transport Sector

- **Mandatory labelling requirement at selling points of motor vehicle diesel having biodiesel content over 5% (Cont')**
 - The measure would not only help develop the local biodiesel market, but also ensure the quality of the fuel, thereby strengthening users' confidence

Promotion of Biodiesel for Transport Sector

- **Mandatory labelling requirement at selling points of motor vehicle diesel having biodiesel content over 5% (Cont')**

汽車生化柴油
Motor Vehicle Biodiesel

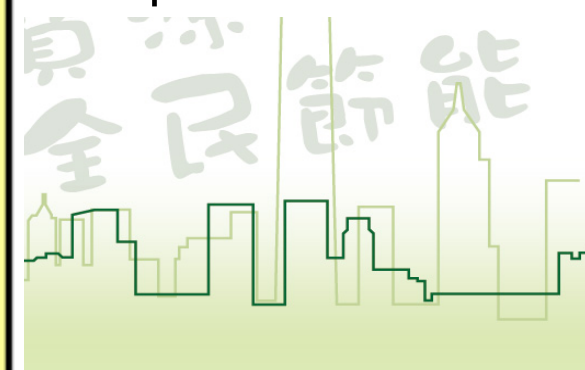
本汽車生化柴油混合物的酯含量為 15%*
This motor vehicle biodiesel blend contains 15% of ester content*

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

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).

Sample of Label



Promotion of Biodiesel for Transport Sector



- **Government take the lead in using bio-diesel**
 - A 16-month pilot scheme was launched in January 2012 to use B5-Diesel, of about 3.5 million litres, in vehicles, vessels, boilers and diesel engines of 5 relevant government departments
 - To pioneer the use of biodiesel in Hong Kong enabling its wider adoption progressively
 - The scheme covered 120 police vehicles, five vessels, four dual fuel engine generators and 12 boilers
 - Accounting for some 8% of overall Euro V diesel consumption by the Government

Promotion of Biodiesel for Transport Sector



- **Government take the lead in using bio-diesel (Cont')**
 - In view of the good result, the Government has started a second phase of the pilot scheme in May 2013 to expand the use of B5 diesel in more government departments with an estimated total consumption of about 8 million litres in two years.





Promotion of Biodiesel for Transport Sector

Summary

- **“Feasibility Study of Using Biodiesel as Motor Fuel in Hong Kong”** carried out by the Government in 2003
- **Duty-free policy on pure auto-biodiesel**
- **Regulatory control**
 - Specifications for auto-biodiesel under Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap 311L)
 - Mandatory labelling requirement at selling points of motor vehicle diesel having biodiesel content over 5%
- **Government take the lead in using biodiesel**



Thank You

珍惜資源
全民節能