Care for the Environment

Our commitment to innovation and concern for the environment are helping usher in a new era.

Environmental Policy

We recognise the potential environmental impacts of our services and are committed to mitigating and minimising these impacts in the following ways:

- Preventing pollution and continually improving our environmental performance by establishing and achieving objectives and targets;
- Conserving resources by reducing waste at source, and recycling and reusing resources;
- Minimising and controlling emissions from buses by adopting control measures and providing professional bus repair and maintenance services;
- Enhancing staff environmental awareness by providing training in line with our environmental policy and environmental objectives and targets, as well as in relation to the potential environmental impacts arising from our operations;
- Communicating our environmental policy and environmental requirements to our contractors and suppliers, and making the policy available to the public;

- Responding to environmental inquiries from stakeholders promptly and ensuring effective communication on environmental issues internally; and
- Ensuring compliance with all applicable local environmental legislation and other relevant requirements.

Environmental Bus Design

We are committed to creating a better environment by investing in environment-friendly buses that meet the strict exhaust emission standards of the European Council of Environmental Ministers. As at the end of 2016, there were 2,010 and 191 air-conditioned Euro V or above buses in the KMB and LWB fleets respectively. In collaboration with our suppliers, we have been gradually replacing older bus models (i.e. Euro II/III double-deck diesel-powered buses) with the latest, more energy-efficient bus models (i.e. Euro V/VI double-deck diesel-powered buses). In 2016, the average energy use per kilometre of Euro V/VI buses was about 20% less than that of Euro II/III buses.

KMB won Certificate of Merit in Hong Kong Awards for Environmental Excellence

KMB won the Certificate of Merit in the Transport and Logistics category at the 2015 Hong Kong Awards for Environmental Excellence.

The aircraft-style "Posilock" fuel filling system as used on KMB buses

Green Operations

KMB and LWB reuse and recycle a wide range of materials.

Tyres

In 2016, 25,000 used tyres (equivalent to a saving of 1,250 tonnes in solid waste disposal at landfills) were retreaded at our retreading workshop. More than 18,000 scrapped tyres and 130 tonnes of tyre chips, which would otherwise have been disposed of at landfills, were collected by an agent for recycling into various products.

Fluorescent Tubes

Since 2006, we have sent a total of around 840,000 used fluorescent tubes to the Government's Chemical Waste Treatment Centre for recycling.

Oil and Chemicals

In 2016, around 260,000 kilograms of solid chemical waste were treated and stored according to type in designated areas at bus depots before being disposed of by a registered chemical waste collector at the Government's Chemical Waste Treatment Centre. Around 594,000 litres of waste oil were recycled or disposed of in accordance with the statutory standards. Around 160,000 kilograms of waste lead-acid batteries were disposed of by a licensed contractor in compliance with Environmental Protection Department ("EPD") instructions, including some which were exported to overseas facilities approved by the EPD under the Basel Convention.

Waste Water Treatment

Our depots are equipped with 11 automatic waste water treatment systems with a capacity of 520 cubic metres per day. Chemicals are added to separate the solid impurities from the waste water produced during daily operations, with the impurities being disposed of at landfills and the treated water discharged into the public drainage system.

Emission Reduction

We adopt the latest technologies to reduce roadside emissions and maintain good air quality in our bus compartments.

To meet the stringent exhaust emission standards laid down by the European Council of Environmental Ministers, we use Near Zero Sulphur Diesel, renew the bus fleet with the latest low-emission models and upgrade older buses by retrofitting exhaust treatment devices, including Diesel Oxidation Catalysts, Diesel Particulate Filters and Selective Catalytic Reduction units.

The Eco-Driveline System, a standard feature on new buses since 2003, reduces exhaust emissions by 6%-10% compared with conventional drivelines by improving fuel economy. As at 31 December 2016, KMB had improved emissions of particulate matter and nitrogen oxides by 96% and 74% respectively compared to 1992.

Selective Catalytic Reduction Devices

At the end of 2016, 2,043 KMB and 223 LWB Euro IV, V and VI buses were equipped with a Selective Catalytic Reduction device, which reduces emissions of nitrogen oxides, as the ammonia formed from the urea solution converts nitrogen oxides into nitrogen gas and water vapour.

Checks on CO_2 Concentration

Each year, 80 KMB/LWB buses from passenger-intensive bus routes are selected for a data-logger measurement of CO_2 concentration, with compliance typically being achieved.

Exploring New Low-emission and Zero-emission Bus Technologies

We put a great deal of effort into improving environmental protection by exploring various kinds of zero- and low-emission technologies.

We have co-developed with the manufacturer the "hBus" which is a Euro VI diesel electric hybrid 12m air-conditioned double-decker, equipped with an electric driveline, a battery power pack and a generator driven by an Euro VI diesel engine supplying electricity to drive the traction motor to power the bus. The hBus adopts state-of-the-art start/stop technology, by means of which, depending on the state-of-charge of the battery and the actual power requirements of the vehicle, it can shut down the engine at speeds below 7 km/hr, leaving the vehicle to rely on battery power. The engine is restarted once the vehicle exceeds 11 km/hr. Regenerative braking recovers otherwise wasted braking energy to improve overall fuel efficiency.

Fuel Consumption and Greenhouse Gas Emissions

To reduce fuel consumption and greenhouse gas emissions, we adopt a number of measures on our bus fleet and across our operations:

- The aircraft-style "Posilock" fuel filling system is used to refuel KMB buses.
- Ambient sensors are installed on air-conditioned buses to save energy by reducing unnecessary cooling.
- The use of synthetic gearbox oil extends the oil drain interval from 30,000 to 150,000 km, reducing waste oil by 80%.
- The mileage-based oil change scheme brings about a 40% reduction in engine oil consumption and waste oil.

Green Measures in the Office

The Green Office concept drives both the design and the renovation of our premises. Air-conditioning thermostats are set at 25.5°C to conserve energy and protect air quality in line with the Government's Action Blue Sky Campaign. Lower-energy LED lighting is used in all newly renovated office spaces in depots and in the common areas of our headquarters building, including the main lobby, to reduce electricity consumption and the demand for air-conditioning. As part of our dedication to promoting a low carbon environment, we are progressively installing energy efficient lamps in place of the existing high intensity discharge high-bay lamps in our bus depots. In 2016, the use of energy saving induction lamps helped the company reduce its total electricity consumption by 30%.

25,000 used tyres were retreaded at our retreading workshop