

Case Study: Transport for London Reducing Visible and Invisible Emissions

Since 1996 Transport for London (formerly LTB) have been looking for ways to reduce both the visible and invisible emissions from London's bus fleet. An important driving factor was increasing concern about the health effects of small particles (particulate matter) on health. TfL considered a range of options including Compressed Natural Gas (CNG) Liquid Petroleum Gas (LPG) and Diesel Particulate Filters (DPFs). The need to compare these technologies on the basis of real world data, led to the development of the MLTB test cycle, developed in association with Millbrook Proving Ground. This gave a reliable method of comparing the emissions performance of these technologies, on a cycle representative of operating conditions in the capital.

The Most Beneficial and Cost Effective Solution

The results showed that ULSD combined with DPF technology was the most beneficial and cost effective solution for reducing emissions of particulate matter, hydrocarbons and carbon monoxide.

Incentives from TfL facilitated the introduction of Ultra Low Sulphur Diesel from 1996 over a period of 2 years, and this is now the standard for UK diesel fuel. In 1999 TfL also began a DPF retrofit programme on Euro II buses as well as requiring operators to fit DPFs on all Euro III buses coming into the fleet as part of contract requirements. By December 2005 all 8000 buses in the TfL fleet have been fitted with DPF systems, the majority of which are CRT® technology supplied by Eminox.

375 Tonnes of Particulate Matter Removed

The size of the London bus fleet has grown from 6000 vehicles in 1989 to over 8000 today, but emissions of particulate matter have been dramatically reduced. Since 1999, DPFs have prevented 375 tonnes of particulate matter from polluting the atmosphere.

New Technology Refined to Meet Exacting Standards

Having successfully tackled particulate matter emissions TfL are now turning their attention to reducing Nitrogen Oxides or NOx. Again TfL have worked closely with Eminox and over 2 years of trials, new SCRT® technology has been refined to meet TfL's exacting requirements. Once the trials are complete TfL will then evaluate the results and use them to inform future policy on emission reduction technology.

