

Clean Fleet Management: Addressing Road Fleet Externalities

Energy Consumption

Road fleets are our modern-day work horses that ensure that goods, services and people are efficiently mobilized. While they a modern day necessity, they are also contributing to some of the most pressing sustainability problems that our planet faces today such as fuel security, air pollution and climate change.

The International Energy Agency (IEA) estimates that the transport consume 60% of the world's petroleum supply. 80% of the total transport energy demand goes to road vehicles which also contributes 23% of the total Carbon dioxide emissions worldwide.

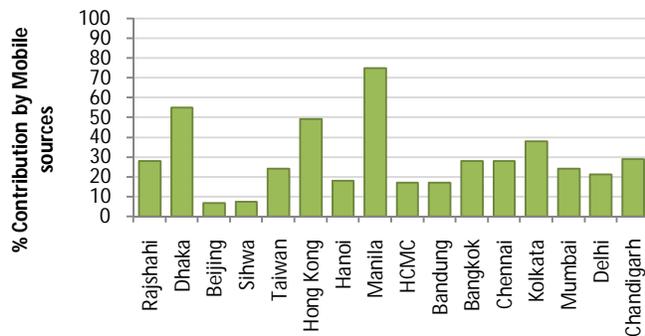


Fig 1. % Contribution of Mobile Sources to PM 2.5
Source: Oahn (2008)

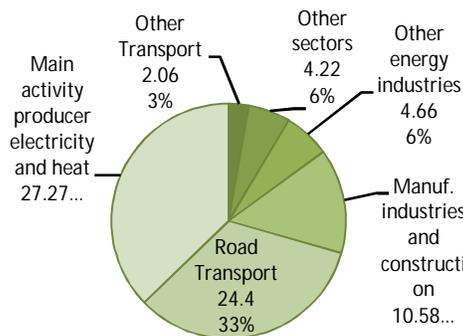


Fig. 2: 2007 CO2 Emissions from Fuel Combustion in million tons CO2
Source: IEA (2009)

Air Pollution Impacts

Another serious problem associated with road vehicles is air pollution. The World Health Organization estimates that more than half a billion people die prematurely each year in Asia due to air pollution. Vehicle are primary sources of air pollutants such as particulate matter (or suspended particles), NOx, SOx, VOCs, CO which may directly or indirectly affect human health, the economy and the environment.

Climate Change Impacts

Road vehicles are also major contributors to the acceleration of climate change. The IEA estimates that 23% of the global energy-related Carbon dioxide emissions are from road vehicles and that their contribution will continue to rise in the future. Moreover, road vehicles are also significant sources of black carbon which has recently been implicated as the second most significant contributor to global warming next to Carbon dioxide.

The road transport sector shall continue to be a major consumer of energy and a major source of GHG and air pollutant emissions as the trends in vehicle ownership and vehicle use continue to increase in our societies.

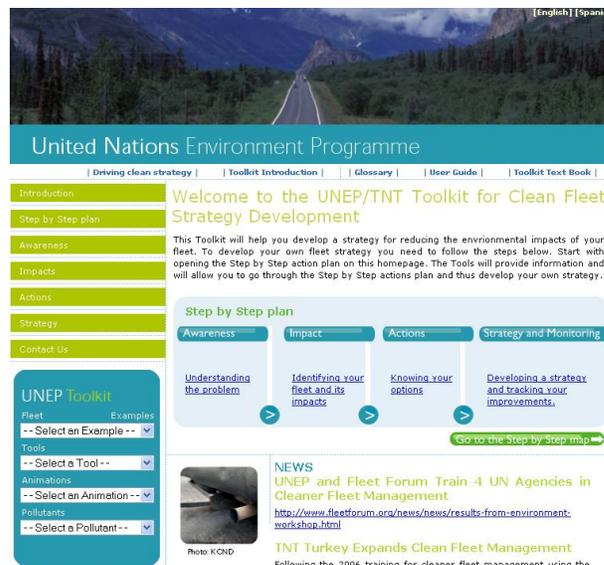
UNEP-TNT Clean Fleet Strategy Development Toolkit

Clean fleet management can lower the adverse environmental impacts of vehicles, improve their efficiencies and lower down vehicle operating costs. The UNEP-TNT Toolkit for Clean Fleet Strategy Development provides a starting point for organizations which are actively looking for ways to clean up their fleet. <http://www.unep.org/tnt-toolkit/>

The said toolkit contains tools that aims to enable fleet managers and other interested stakeholders to: a) raise awareness on the impacts of vehicle fleets; b) assessing the impacts of specific vehicle fleets; c) knowing the different actions that we can take in order to move towards cleaner fleets; d) developing a clean fleet strategy and; e) implementing and monitoring action.

The Clean Air Initiative for Asian Cities, has been the conduit for the UNEP- PCFV in rolling out the said toolkit in different parts of

Asia, as well as in other regions such as the Middle East, Latin America and Eastern Europe. If you want to know more about our activities on the toolkit, please visit <http://cleanairinitiative.org/portal/CleanFleetManagement>



Green Fleet Program of Meralco South Distribution Services(Philippines)

Meralco South Distribution Services is the first entity in the Philippines to use the UNEP Clean Fleet Management Toolkit in developing a clean fleet strategy. In 2009, Meralco SDS decided to move towards a cleaner and more efficient fleet as vehicle fuel consumption is a big portion of its operating expenses. They formed a project team (creatively named Utak Berde) which handled the project implementation. The team was responsible for data gathering, baseline calculation, problem analysis, target setting, strategy formulation, implementing and monitoring of measures.

The main clean fleet management measures employed by Meralco SDS are eco-driving, better vehicle maintenance and vehicle replacement. Meralco SDS has recognized the importance of driver behaviour in the fuel economy of its fleet and have institutionalized eco-driving as part of their driver training. They have reviewed and improved their vehicle maintenance schedules and protocols in order to ensure that the vehicles are properly maintained. They are also in the process of changing their old vehicles and those whose specs are no longer appropriate for their needs. They have moved towards using new-fed diesel vehicles which are inherently more fuel efficient than gasoline-fed ones.

The initiatives of Meralco SDS is paying off as they have posted more than 14% savings during the first half of 2010 (as compared to the 1st half of 2009). The Utak Berde Team has recently been awarded with a special citation during the recently concluded Lopez Group Business Excellence Awards. Moreover, the measures done in Meralco SDS are now being rolled out throughout the whole Meralco Franchise.

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