

Vehicle Emission Standardⁱ

Sector	ENERGY
Subsector	Transport
Technology name	Vehicle Emission Standard
Scale	Medium to large scale
Availability	Short to Medium term
Technology to be included in prioritization	This type of technology is prioritized nationally and has been considered in various transport-related plans. Vehicle emission standards could be implemented locally (for example at the city level), regionally (at the provincial level), nationally (for the whole of Cambodia).
Background/notes	The general goal of a vehicle emission standards program is to reduce emissions and control pollution from motor vehicles in use. A comprehensive strategy may include the following components: stricter emission standards for new vehicles, specifications for clean fuels, proper maintenance of vehicles in use.
Implementation assumptions	<p>It is assumed that air quality problems are related to vehicle emissions, which are the main contributors to pollution in urban area.</p> <p>Private cars, commercial vehicles and motorbikes are the main modes of transportation in Cambodia.</p> <p>In the absence of reliable mass public transport, motor vehicles will continue to be the main contributor of the transport mix in Cambodia in the foreseeable future.</p> <p>The main obstacles to the implementation of vehicle emission standards in Cambodia are: the availability of higher quality fuels (level of lead and sulphur) which are dependent on imports from neighboring countries, the low level of awareness of consumers which may see stricter standards as costly in terms of vehicles to be purchased (newer versus second hand) and cleaner more expensive fuels.</p> <p>In order to maximize current catalyst technologies (which reduce CO, HC and NO_x), sulfur concentrations in gasoline need to be limited to 500 ppm. Future technologies may require even lower concentrations of 30-50 ppm such as in Europe, the USA and Japan.</p> <p>It will be necessary to phase in stricter standards year by year and step by step as the average fleet age of vehicle decreases (following the examples of Europe, California, Japan, China etc).</p>
Impact Statements (how this option impacts the country development priorities)	
Country social development priorities	Fuel quality standards should be set not only to reduce GHG emissions but also because they contribute to improved public health and cleaner environment.
Country development priorities	Stricter vehicle emission standards will promote higher efficiency and is a priority of the Cambodian Government

	with regards to energy security, reducing dependency on imported energy. Reduced air pollution will improve public health and improve environmental conditions.
Country environmental development priorities	Vehicle emission standards can help Reduce air pollution; Reduce GHG emissions; Increase energy supply security due to reduction of imported oil.
Other consideration and priorities such as market potential	The RGC recognizes and supports efforts in environmental protection, addressing climate change, and improving efficiency of energy resource use.
Costs (US\$)	
Capital costs over 10 years	N/a
Operational costs over 10 years	International studies of costs and fuel indicate opportunities to achieve further fleet fuel economy gains from more stringent standards, even in Europe and the US. Savings potential in Cambodia would be significant due to the old age of the vehicle fleet. However, without regulatory emission standards the market will not necessary adopt cleaner vehicles (hybrid, electric, etc), as buyers may trade economies in fuels for larger and more powerful vehicles. Basing stringency decisions on existing standards elsewhere requires careful consideration of differences between the home market and compared markets in fuel quality and availability; fuel economy testing methods; types and sizes of vehicles sold; road conditions that may affect the robustness of key technologies; and conditions that may affect the availability of technologies, for example, availability of sophisticated repair facilities.
Other costs over 10 years	N/a

ⁱ **This fact sheet has been extracted from TNA Report – Kingdom of Cambodia - Technology needs assessment and technology action plans for climate change mitigation. You can access the complete report from the TNA project website <http://tech-action.org/>**