

Scaling up Energy Efficiency: Bridging the Action Gap

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Energy Efficiency in Transport

Presenter: Mr Gong Huiming

Mr Gong Huiming is a Programme Officer in the China office of the Energy Foundation, where he works in the area of transport policy. Before joining the Energy Foundation in 2005 he was employed in China's Global Environmental Institute for eight months, managing a project on the impact of the transport sector in energy demand and emissions of greenhouse gases.

Mr Huiming holds a Master's degree from Peking University. In 2003 he earned a second MSc from the University of California, Riverside, where he majored in environmental chemistry and environmental toxicology.

Discussant: Mr Axel Friedrich

Mr Friedrich holds a degree in technical chemistry from the Technical University of Berlin. He has been employed in the German Federal Environment Agency for over 27 years, in different capacities. Since 1994 he has been the head of its Environment, Transport and Noise division. He is a renowned expert in sustainable transport, climate change abatement, non-regulated emissions and influence of transport fuels on emissions.

Mr Friedrich has been at the forefront of the debate on vehicle and fuel efficiency standards, both in Germany and in the European Union context. He has also contributed to World bank sponsored programmes to curb air pollution in Asia and Latin America. He was awarded the 2006 Haagen-Smit Clean Air Award for his outstanding contributions to environmental protection.

Description of the programme presented

In 2005 China adopted its first mandatory vehicle fuel economy standard – the Fuel Consumption Limits for Passenger Cars. Requirements for model certification and certificated models in the standard went into effect on 1 July 2005 and 1 July 2006, respectively. If implemented well, the standard could improve the fuel efficiency of China's fleet by 15 percent in 2015.

The China Automotive Technology and Research Center (CATARC) has analysed the effects of the standard since its implementation. According to official data, the National Development and Reform Commission (NDRC) has approved 417 vehicle models since 20 July 2005. All these models met phase I limits and three-quarters of them met phase II limits ahead of time (phase II limits will only take effect in 2008).

In October 2006, after confirmation about the accuracy of the fuel economy data from manufacturers, NDRC publicised for the first time these data for 409 passenger car models. These data showed that the average performance of the models considered exceeded the phase I limits of the standard by 15 percent. CATARC further analysed the fuel economy of 845 car models, of which 84 percent met phase I limits and 53 percent met phase II limits.

Since China has the highest population in the world, public transport will be central to its sustainable development: China –and the world– could not sustain the emission volumes that would result were Chinese vehicle ownership levels to come to par with those in the United States. Public transport systems are more efficient in terms of land use and energy consumption, compared to private motoring.

Bus rapid transit systems in particular are a promising option. More than 20 cities have shown an interest in developing such systems. In Beijing, the first bus rapid transit system corridor was finished last year and is now in operation. The daily passenger boarding is close to the light railway systems in Beijing. The second corridor is under construction and the third and fourth will be completed by 2010. In Hangzhou, the first such corridors opened in March 2006. More information is available at www.chinastc.org/

Main points of the presentation

1. China is experiencing an unprecedented level of motorisation. Continuing economy growth and a still low vehicle ownership level are likely to sustain this trend for another two decades.
2. Conventional vehicles are likely to continue to dominate the Chinese auto market. Because of this, advanced technologies, fuel economy standards, and other regulations and financial incentives should be prioritised to improve the energy efficiency of the vehicle fleet and reduce emissions of greenhouse gases and exhaust pollutants.
3. Fuel quality in China is far lagging behind international standards and above China's vehicle emission standards. A national fuel desulphurisation plan would help introduce cleaner technologies and support the impact of emission standards.
4. Inspection and maintenance procedures are poor. As a result, vehicles consume more fuel and emit more pollutants than they would otherwise. Improved inspection and maintenance systems, and good vehicle scrappage mechanisms should be a central part of the Chinese urban air quality policy.
5. Given China's population and vehicle ownership trends, a sustainable transport policy for China will by necessity rely on bus rapid transit systems.