

Introduction to Panel 8: Transport and mobility

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Introduction

Transport accounts for nearly 27 % of global CO₂ emissions and a similar share of global energy use. Transport is also the fastest rising use of oil and the most rapidly growing source of CO₂ emissions, with the situation in the developing world much more critical than in OECD countries. Ironically most of the world does not rely on energy intensive automobiles, yet this mode is rising in popularity in the largest countries in Asia, having taken over the streets of Latin America. Efforts to tame automobile fuel use, strengthen the use of less energy intensive modes like collective transport, or structure cities (and people's lives) to reduce distances required for access to friends, work, services, and pleasure have only had a limited impact. The conundrum is that rapidly growing transport in urban areas, however important for economic and human growth is rapidly choking cities of much of the third world and even Europe. And the same vehicles emitting CO₂ also fill the local atmosphere with dangerous criteria pollutant leading to smog and particulate matter.

What is the best approach to taming transport and its energy use? This session will focus on answering that question.

What are the proven impacts of fuel saving technologies and fuel saving policies? A number of papers address various mechanisms to deal with this issue (8,001 Sofronis Clerides, Theodoros Zachariadis and 8,085 Alex Veitch), including the sensitive issue of trying to get consumers to buy smaller cars (8,101 Frances Sprei, Sten Karlsson and 8,060 Bettina Hatzenbichler). Two technical papers on Plug-in Hybrids (8,332) and tire pressure (8,260 Sten Karlsson) complete the first session on Tuesday, June 5.

The issue of energy-efficient transport and lifestyles is as important as technical issues. On Wednesday, June 6, we hear about how you drive (8,111 Peter Wilbers, Henk Wardenaar and 8,152 Harmsen, van den Hoed, Harmelink), as well as where you live (8,012 Yusak Susilo, Dominic Stead), and who you are as related to transport activity and fuel use. In the second session we deal with broader issues, such as the overall eco-efficiency of transport and house location (8,144 Irmeli Wahlgren), the relationship between personal lifestyles and car use (8,050) and a key question about the effectiveness of car-sharing (8,250 Georg Wilke and Daniel Bongardt).

We examine issues related to alternate fuels during Thursday's first session. First we discuss how to accredit – i.e., certify – biofuels, from a UK perspective (8,262 Neil Wallis, Jessica Chalmers). Then we hear about pathways to a hydrogen economy (8,287 Martine Uytterlinde). Finally, we hear about the exciting developments in battery storage as part of the enormous popularity of electric bikes in China (8,329 Jonathan Weinert, Andrew Burke).

Clean development and developing countries occupy the last two sessions on Thursday and Friday. The issue of the Clean Development Mechanism itself is discussed (8,147 Sterk et al), an interesting description of experience transferring European transport planning processes to S.E. Asia (8,188 Pfaffenbichler et al) and an application of bus-rapid transit to Dhaka, Bangladesh (8,066 Rahman Shafiq-Ur) on Thursday. Friday's session focuses on China (8,097 Julien Allaire), India (8,270 Zhou et al), and the general problem of CO₂ emissions (8,158 Lee Schipper, Maria Cordeiro and Wei-shiuen Ng, — unfortunately the authors cannot attend.)

There are also a number of good posters on transportation. Paper 8,015 by Zia Wadud et al deals with a complex issue that has arisen in conjunction with tradable permits (and environmental justices), the distributional consequences of such permits. Paper 8,044 (Daniel Bongardt and Kristina Kebeck) adds to the discussion about the effectiveness of the agreement between EU and the automakers in Europe. Paper 8,160 (Hribar et al) examines possibilities for saving energy from better traction in rail (an almost forgotten mode at eceee, but one whose importance is rising. Paper 8,161 (Zagama et al) presents a new approach to the almost inevitable energy transition in mobility as applied to the Dutch case. Paper 8,189 by Paul C. Pfaffenbichler and Simon Shepherd proposes a strategic approach to technical vs. behavioural/demand changes, certainly an issue on everyone's mind given the increasing urgency of climate-energy problems and the slowness of technologies we adopt to change. These five posters give ECEEE attendees an extra chance to discuss some of the key issues facing the transport sector.