

## *International Energy Agency*

The International Energy Agency (IEA) is an autonomous body established in November 1974 within the framework of the Organisation of Economic Co-operation and Development (OECD) to implement an international energy programme. It carries out a comprehensive programme of energy co-operation among 28 of the OECD member countries.

The basic aims of the IEA are to:

- Maintain and improve systems for coping with oil supply disruptions.
- Promote rational energy policies in a global context through co-operative relations with non-member countries, industry, and international organisations.
- Co-operate in maintaining a permanent information system of the international oil market.
- Improve the world's energy supply and demand structure by developing alternative energy sources and increasing the efficiency of energy use.
- Assist in the integration of environmental and energy policies.

The IEA member countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, Germany, Hungary, Ireland, Italy, Japan, Republic of Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States. The European Commission also participates in the work of the IEA.

## *Experts' Group on R&D Priority-Setting and Evaluation*

Research, development, and deployment of innovative technologies are crucial to meeting future energy challenges. The capacity of countries to apply sound tools in developing effective national research and development (R&D) strategies and programmes is becoming increasingly important. The IEA Experts' Group on R&D Priority-Setting and Evaluation (EGRD) was established by the IEA Committee on Energy Research and Technology (CERT) to promote development and refinement of analytical approaches to energy technology analysis, R&D priority setting, and assessment of benefits from R&D activities.

Senior experts engaged in national and international R&D efforts collaborate on topical issues through international workshops, information exchange, networking and outreach. Nineteen countries and the European Commission participate in the current programme of work. The results reported here are intended as input to and support of ongoing work of the CERT and, more generally, that of the IEA Secretariat.

For information specific to this workshop, including the presentations, see:

<http://www.iea.org/newsroomandevents/workshops/workshop/name,30671,en.html>

For more information on activities of the EGRD, see [www.iea.org/about/experts.asp](http://www.iea.org/about/experts.asp).

## MOBILITY: TECHNOLOGY PRIORITIES AND STRATEGIC URBAN PLANNING

22 -24 May 2013, Finland

### **Rationale**

Currently nearly 30% of world total energy demand is used for transportation and 93% of that share is oil and other liquid fuels. Globally, per capita incomes are rising and there are inexorable trends toward massive urbanization. According to the IEA *World Energy Outlook* reference scenario, the share for transportation energy across all modes is expected to increase to 61% by 2030.

While technological progress will lead to more efficient vehicles and programmes to promote an energy efficient driving style, these efforts to reduce consumption and increase efficiency in the transport sector will not be sufficient to curb consumption or CO<sub>2</sub> emissions. Finding alternatives to traditional means and modes will be necessary, as will continued R&D for non-liquid fuel sources.

Policies to improve the use of liquid fuels from renewable energy sources in the transport sector are in place in some countries (e.g. European Union target of 10% share by 2020). Electric cars also have great potential not only to reduce consumption, but could also play a role in balancing the electricity networks. In order to reduce future consumption in the transport sector and to achieve a low-carbon economy, both these sources of energy will need to be deployed on a much larger scale.

More broadly, strategies must explore alternative mobility futures. Modal shift options can be implemented. Communication technologies have enabled remote work to become a reality. Rethinking commuting needs, whether road or rail transport, can provide cost-effective savings (office space, infrastructure investments), while at the same time reducing CO<sub>2</sub> emissions. Reducing commuting needs one day per week has significant potential and can be promoted by government policies and/or incentives. However, programmes must account for other factors, e.g. displacing the point of electricity consumption is not a reduction, and policies must be well-drafted to avoid gaps in compensation. And modal shifts need to be attractive.

As a consequence, time and effort will be needed to strategic approaches, frameworks for weighing costs and benefits, establish standards and benchmarking. National policy makers will be challenged to allocate sufficient resources. Urban planners will be faced with multiple new criteria. Revised infrastructure needs will require inter-city and cross-border co-operation to be strengthened.

These transformations will likely have strong effects on local, national, regional, and global energy economies, such as shifts in employment or creation of new industries. These call for a holistic approach to transportation planning, involving energy and other policies, as well as greater co-operation between the transport, electricity distribution and agriculture sectors.

For these reasons, mobility technologies and strategies will be the pivotal issue for IEA Member and Partner countries in the near- and mid-term future.

### **Scope**

This event examines how energy policies, strategies for distribution and consumption, urban planning and cross-sectoral co-operation may work to achieve the transformation needed in the transport sector to achieve a low-carbon economy.

### **Target Audience**

This workshop is held in collaboration with the IEA Working Party on Energy End-Use (EUWP), the Technologies Transport Coordination Group (TCG), and the Technology-related Implementing Agreements. Policy makers, urban planners, experts in vehicle technologies and fuels as well as non-vehicle transport solutions are invited to attend.

## MOBILITY: TECHNOLOGY PRIORITIES AND STRATEGIC URBAN PLANNING

22 May 2013

**9:00 – 9.10**     **Opening**  
Rob Kool, EGRD / NL Agency

**PLANNING FOR A LOW-CARBON TRANSPORT SECTOR** session chair Robert Marlay, DOE  
*Visions/scenarios and forecasts of the transport sector and sustainable transport planning*

**9:10 – 9.45**     **Keynote speech: An integrated approach to develop the transport system of Metropolitan Helsinki**  
Suvi Rihtniemi, CEO Helsinki Region Transport

**9:45 – 10:30**   **Global scenarios / targets**  
John Dulac, Transport Analyst, IEA  
IEA Global Fuel Economy Initiative or Transport Roadmap, **video conference**

**10:30 – 10:50** **Nordic and Finnish scenarios for a low-carbon society**  
Tiina Koljonen, VTT

**TECHNOLOGIES FOR SUSTAINABLE TRANSPORT (session chair Herbert Greisberger)**  
*New fuels and technologies*

**11:00 – 11:45** **Vehicle energy efficiencies**  
Nils-Olof Nylund, VTT

**11:45 – 12:30** **An alternative fuel for road transport**  
Tobias Denys (VITO, Belgium)

**12:30 – 12:50** **Integrating transport energy supply with energy system of the future**  
Juhani Laurikko, VTT

**13:00 – 14:00**   **Lunch**

**13:45 – 14:30** **Strategies for transport, vehicle electrification & urban air quality in China**  
Professor Jianping Wu, MOST, China

**14:30 – 15:00** **Electric bus charging models**  
Robert Marlay, DOE

**15:00 – 15:45** **EVE – the Finnish electric vehicle programme – including a co-Nordic dimension**  
Markku Antikainen, Virebit

**15:45 – 16:00**   **Break**

**16:00 – 16:30** **ICT as an enabler for smart transport services and energy efficiency**

Matti Kutila, VTT

**16:30 – 17:30 Panel discussion**

**17:30 – 18:30 Visit to VTT's research facilities in Otaniemi**

Facilities for Research on the production of biofuels (gasification)

Facilities for engine and vehicle research (light- and heavy-duty, including EVs)

**18:30 – Sightseeing and transfer to dinner**

**ca. 19.00 – 19.30 Dinner at Kulosaaren Casino (by the sea, sightseeing on the way through Helsinki) (<http://www.kulosaarencasino.fi/en>)**

23 May 2013

**SMART CITIES (session chair Birte Holst-Jorgensen)**

*Case studies around the world*

**9:00 – 9:30 Tekes' new Witty City initiative**

Virpi Mikkonen, Tekes

**9:30 – 10:00 Mobility planning for 90 smart cities in China**

Professor Jianping Wu, MOST, China

**10:00 – 10:30 Case Stockholm: A fossil-free city in 2050. Some examples on environmentally friendly vehicles, congestion fees and logistics**

Jonas Ericson, City of Stockholm

**10:30 – 11:00 Urban development and transport in Greater Copenhagen**

Thomas Sic Nielsen, Technical University of Denmark

**11:00 – 11:30 Amsterdam Smart Cities**

Frans-Anton Vermast, Amsterdam Smart City

**REGIONAL, NATIONAL AND LOCAL POLICY FRAMEWORKS - Sessions Chair - Rob Kool**

*Linking transport issues with urban or national government stakeholders and policy frameworks*

**11:30 – 12:00 Reducing Energy Use through Transport Planning in the United States: Proven and Promising Practices**

Chris Porter, Cambridge Systematics

**12:00 – 12:30 EU mobility policy framework**

Juhani Jääskeläinen, Head of Unit for ICT in Transport, EC

**12:30 – 13:30 Lunch**

**13:30 – 14:00 Transport technology gaps identified by IEA End-use Working Party**

Nils-Olof Nylund, VTT/IEA EUWP

**14:00 – 15:00 Panel session: policy makers and urban planners**

**15:00 – 16:00 Wrap up and end of day 2**