43rd LCA Discussion Forum

LIFE CYCLE ASSESSMENT OF ELECTROMOBILITY ANSWERS AND CHALLENGES

Wednesday, April 6, 2011, 9h15, Zürich, ETH Central Building, GEP Pavillon

We kindly invite you to the **43rd discussion forum on Life Cycle Assessment**
The official language during this event is English

Alternative ways and means of transportation are necessary in order to reduce the environmental impacts of mobility. In the recent years biofuels were first seen as a main option and then LCA showed also possible hazards of this development. Recently, public interest is rapidly shifting towards electro mobility. Therefore it is necessary to also gain better knowledge about the environmental impacts of this technology. This includes a modelling of the pathways of the necessary increase in electricity supply and an appropriate modelling of battery manufacture. At this forum most recent results of life cycle assessment studies of electric car driving compared to driving fossil- and agro-fuelled cars will be presented. The environmental performance of individual and public electric mobility will be discussed in view of promising win-win strategies. Policy implications and research needs derived from current LCA work will be highlighted

The forum will profit from the input of several topical experts, covering aspects such as electricity demand of electric vehicles in everyday life, marginal electricity supply mixes, design, performance and manufacture of batteries as well as resource and raw materials availability.

This discussion forum will address the following questions:

- What is the state of the art information underlying todays LCA of electric cars?
- Do we know enough about the long-term performance and supply chain of batteries?
- How might an increase in electricity demand affect the (Swiss) consumer mix?
- What are crucial aspects to be considered in an LCA of electric mobility to support public policy making?

We look forward to meeting you in Zürich!

Rolf Frischknecht

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Program as of April 4, 2011:

Time	Title	Speaker
8.30 h	Registration, Coffee and Croissants	
9.15 h	Welcome and introduction	Rolf Frischknecht, ESU-services Ltd.
	LCA of electric car driving: policy and research context	Chair: Arthur Braunschweig
9.20 h	LCA E-Mobility: Current results of the Fraunhofer System Research for Electromobility (FSEM) and need for further research	Michael Held, LBP
9.45 h	Electric vehicles in a future energy system context – LCA and policy implications	Udo Lambrecht, ifeu
10.10 h	Life cycle assessment of driving electric cars and scope dependent LCA models	Rolf Frischknecht, ESU-services Ltd.
10.35 h	Methodological approaches for determining marginal electricity mixes	Martin Jakob, TEP Energy GmbH
11.00 h	*Coffee break*	
	LCA of electric car driving: mobility context	Chair: Rolf Frischknecht
11.30 h	Electric mobility – opportunities for sustainable transport by rail and road	Markus Halder, SBB
11.55 h	Comparative assertion of battery electric cars with various alternatives	Hans-Jörg Althaus, Empa
12.20 h	Life cycle emissions comparison of all-electric and hydrogen fuel cell electric passenger cars	Andrew Simons, PSI
12.45 h	*Lunch break*	
	LCA of electric car driving: technical aspects and future developments	Chair: Rolf Frischknecht
13.45 h	Electricity consumption: Real life compared to driving cycle performance	Marc-André Beck, Kamoo
14.10 h	Emobility at Saft and JCS	Clémence Siret, Saft
14.35 h	Availability of raw materials and resources used in electric cars	Lorenz Erdmann, IZT, Berlin
15.00 h	Comparative life-cycle assessment of electric and conventional vehicles in Portugal	Fausto Freire, University of Coimbra
	EASYBAT: Easy and safe battery switch in an EV	Inbal Fried, Better Place
15.30 h	*Coffee break*	
15.45 h	Plenary discussion: Lessons learned and lessons to be learned in view of public policy making and technology development	Moderation: Arthur Braunschweig
16.30 h	Feedback, wrap-up and farewell	Rolf Frischknecht