



Agenda

Decarbonisation of Heavy-Duty Vehicle Transport: Zero-Emission Heavy Goods Vehicles

Online workshop
28 October 2020



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Start	End	Activity	Speaker/Chair
10:00	11:15	Session 1 – Introduction & Policy Context	Paul Hodson
10:00	10:10	Welcome	Jonathan Davies
10:10	10:25	<i>Introduction: Decarbonisation of Heavy-Duty Vehicle Transport</i>	Paul Hodson
10:25	10:45	<i>The Climate Ambition, an Opportunity for the Transport Sector</i>	Claire Depré
10:45	11:05	<i>Heavy-Duty Vehicles CO2 Emissions: EU Policy Context</i>	Carlos Serra
11:05	11:15	Questions & Answers Session 1	Paul Hodson
11:15	11:30	Break	
11:30	12:45	Session 2 – Technology Readiness	Eveline Weidner
11:30	11:35	Introduction	Eveline Weidner
11:35	11:55	<i>Truck Architecture and Hydrogen Storage</i>	Jaime Sanchez
11:55	12:15	<i>BEV readiness</i>	Erik Nellström
12:15	12:35	<i>Decarbonisation of Heavy Goods Vehicles with a Catenary System: The „eHighway“</i>	Armin Sue
12:35	12:45	Questions & Answers Session 2	Eveline Weidner
12:45	13:30	Lunch Break	
13:30	15:30	Session 3 – LCA & Techno-Economic Assessment	Jonathan Davies
13:30	13:35	Welcome back	Jonathan Davies
13:35	13:55	<i>A Comparative Life-Cycle Analysis of Low GHG HGV Powertrain Technologies and Fuels</i>	Nikolas Hill
13:55	14:15	<i>Renewable hydrogen in fuel cell heavy-duty trucking – Ramp-up towards 2030</i>	Reinhold Wurster
14:15	14:35	<i>JRC- EUCAR - Concave Well to Wheel v5</i>	Matteo Prussi
14:35	14:55	<i>Challenges and Opportunities for Highly Electrified Heavy Duty Vehicles</i>	Steven Wilkins
14:55	15:10	Break	
15:10	15:30	<i>Life Cycle Implications of Zero Emissions Heavy-Duty Vehicles</i>	Andrew Kotz
15:30	16:30	Session 4 – Panel Discussion & Conclusions	Paul Hodson
15:30	16:20	Panel discussion: Rolf Döbereiner (AVL); Thomas Fabian (ACEA); Nikolas Hill (Ricardo); Klaus Steininger (DG CLIMA); Armin Sue (Volkswagen); Pietro Caloprisco (FCH JU)	Paul Hodson
16:20	16:30	Concluding statements	Paul Hodson Jonathan Davies
16:30	16:45	Break	
16:45	17:30	Bring-your-own-Cocktail Session	All

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SPEAKERS

Paul Hodson (European Commission, Joint Research Centre)

Paul Hodson is head of the Energy Storage Unit at the European Commission's Joint Research Centre. He previously worked for the Commission on energy efficiency, renewable energy, urban transport, and as a speechwriter.

Before joining the Commission, he was head of transport policy at Manchester City Council and transport policy manager at Reading Borough Council.

He started his career in the Inner Cities Unit of the UK's National Council for Voluntary Organisations. He has a degree in history from Cambridge University and a master in urban planning from Oxford Polytechnic.

Claire Depré (European Commission, DG MOVE)

Claire Depré is Head of the Sustainable and Intelligent Transport Unit in the European Commission's Directorate General for Mobility and Transport. She has led the unit responsible for Intelligent Transport Systems since 2013.

Since 2016, Claire also manages European policies on alternative fuels infrastructure and urban mobility. Together with her team, she has contributed to unlock barriers to access to transport data in the EU and develop a European agenda in the field of cooperative, connected and automated mobility in road transport.

Carlos Serra (European Commission, DG CLIMA)

Carlos Serra is a policy officer at the Road Transport Unit of the European Commission's Directorate-General for Climate Action. He is mainly dealing with the development and implementation of CO2 standards policy for heavy-duty vehicles and real-world emissions.

As an industrial engineer, he has accumulated experience on the three main CO2 sector sources: power production, heat and transportation. He enjoys matching the opportunities offered by technological achievements, policy measures and climate-led investments for the sake of a future decarbonised economy.

Jaime Sanchez (CNH)

Jaime Sanchez holds a Bac. / MSc. in Industrial Engineering from Carlos III University. He has been a visiting predoctoral researcher at the University of Washington (Seattle), is pursuing a PhD. at the Polytechnic University of Madrid and holds several postgraduate degrees in engineering and management.

He is currently Head of Advanced Engineering for Medium and Heavy Trucks in IVECO. He also serves as associate professor at the European University of Madrid, researcher at the Polytechnic University of Madrid and Board Member of Canal de Isabel II. He has previously worked as an Engineer and Executive in various sectors (energy, defense, aerospace and automotive) both as company staff and as an entrepreneur/freelance.

Erik Nellström (SCANIA)

Erik Nellström is product property manager for product sustainability at R&D, where the main task is to analyse and influence Scania's product and service roadmaps.

Erik has a background at both R&D and procurement, and holds a master in sustainable enterprising and a M.Sc. in information technology. Erik is a board member of Swedish Life Cycle Centre.

Armin Sue (Volkswagen)

After a study of mechanical engineering at the University of Hannover, Armin Sue made his PhD. at the institute for mechanical design and tribology in the research of continuously variable transmissions.

In 2003 he started his work at the Volkswagen AG in Wolfsburg, Germany in the Group Innovation Center Europe in the department for transmission research.

The Group Innovation is the global research center for all brands in the Volkswagen Group. In the last more than 12 years he led different projects for future powertrain concepts including battery and fuel cell prototype vehicles. Since 2017 he focused his work on heavy duty vehicles. Since 2018 he is the project manager for catenary trucks.

Nikolas Hill (Ricardo)

Nikolas Hill is an Associate Director and the Knowledge Leader in Transport Technology and Fuels in Ricardo Energy & Environment's Sustainable Transport team. He has over 21 years of experience working on transport, energy and climate change issues for national and international organisations in the public and private sector.

Much of Nik's work has had a focus on analysis and modelling of the potential costs, energy and emissions impacts of efficient low carbon technologies and fuels in different transport modes and in

Life Cycle Assessment (LCA). This work has included a range of the key evidence feeding into the European Commission's Impact Assessments for EU proposals for post-2020 CO2 regulations for LDVs and HDVs.

Reinhold Wurster (Ludwig-Bölkow-Systemtechnik GmbH)

Reinhold Wurster is with Ludwig-Bölkow-Systemtechnik GmbH (LBSG) since 1984, holds the position of Senior Consultant and has over 35 years of professional and project management experience.

His main areas of activity are techno-economic and strategic evaluation of hydrogen and fuel cells in transportation applications and related hydrogen supply and infrastructure issues.

Reinhold was project coordinator of various EU-funded hydrogen and fuel cells projects during the last 30 years.

He coordinated the accompanying research activity on the 50 hydrogen refuelling stations program of the German Federal Ministry of Transport and Digital Infrastructure BMVI (Nov. 2014 – Jun. 2017) with partners.

Presently he is active in two German-Chinese cooperation projects (SGEC and RCS cooperation for H2 mobility in China) funded by German BMVI.

Matteo Prussi (European Commission, Joint Research Centre)

Matteo Prussi is an industrial engineer, with a scientific background in renewable energy conversion technologies. He has been working in the biofuels sector for more than 10 years.

At the Joint Research Centre, his activity focuses on the assessment of the environmental impacts of the various modes of transport, with a focus on alternative sustainable fuels.

Part of his research activities, largely supported by European projects (i.e. ITAKA and BIOREFLY) focused on alternative technologies for biofuels production. Another important part of his research activity dealt with upscale of technologies for microalgae biofuels production, for which he designed two large scale plants, in Italy (BIOFAT project) and in Chile (Algaefuel project). He is currently a member of the CEN/TC 454 as expert observer.

Steven Wilkins (TNO)

Steven Wilkins holds the position of Senior Research Scientist at TNO, the Dutch Organization of Applied Research, where he works on electrified powertrains. He has a background in hybrid, fuel cell, and electric vehicle systems and powertrain modelling and simulation, with a focus on powertrain control and battery management systems. He also holds the position of Assistant Professor in the Electromechanics and Power Electronics group of the Department of Electrical Engineering at Eindhoven University of Technology (TU/e).

He has been involved in a wide range of research projects funded by the UK, Netherlands, and the EU working between research, government, and industry. He is a member of the Powertrains department within TNO, an active member of EARPA within the Task Forces/Focus Groups, EGVIA, Batteries Europe and involved in the ORCA, ASSURED, AEROFLEX, TRANSFORMERS, and 3CCar European projects, among others.

Andrew Kotz (NREL)

Andrew Kotz received his PhD. in Mechanical Engineering from the University of Minnesota where he researched real-world transit bus NOx emissions and vehicle big data. He is currently a Commercial Vehicle Research Engineer at the U.S. Department of Energy National Renewable Energy Lab, where he is part of the Center for Integrated Mobility Science.

At NREL, Andrew's work focuses on leveraging real-world data with advanced analytics and machine learning to enable zero-emission heavy vehicles as well as advance energy efficient and renewable transportation technologies.

PANELLISTS

Nikolas Hill (Ricardo) – see speaker's profile

Armin Sue (Volkswagen) – see speaker's profile

Rolf Döbereiner (AVL List GmbH)

Rolf Döbereiner is working as Product Line Manager Commercial Vehicles and ADAS / Autonomous Drive at AVL List GmbH at Graz, Austria.

Rolf studied mechanical engineering at Technical University of Munich and gained his PhD. on load capacity calculation and NVH of gears and transmissions. As senior manager he was responsible for Simulation Methodology, Fuel Consumption Optimization and Alternative Drives at MAN Truck & Bus SE. Later he was promoted Vice President of Driveline Series Development for trucks and busses.

In his current position, Rolf is responsible for vehicle integration of new technologies such as fuel cell, battery or hybrid vehicle configurations including energy management and controls.

Nikolaus Steininger (European Commission, DG CLIMA)

Nikolaus Steininger studied physics in Regensburg and Munich in Germany and Boulder/Colorado in the United States and holds a PhD. in Physics. Before joining the European Commission in 1997, he was an academic researcher and he worked as system analyst in the private banking sector.

In his career at the European Commission, he has been assigned to DG Research, to the JRC and to DG GROW, where he worked on automotive emissions legislation from 2007 to 2016. Since 2017 he works on HDV CO2 emissions and related topics at the Directorate General for Climate Action.

Thomas Fabian (ACEA)

Thomas Fabian joined the European Automobile Manufacturers' Association (ACEA), which represents the EU's seven major truck producers, as Commercial Vehicles Director in November 2018. In previous roles, he served as Head of the Department Commercial Vehicles, Trailers, Bodies and Buses of the German Association of the Automotive Industry (VDA); Secretary General of the International Association of the Body and Trailer Building Industry; Director Transport Policy for the German Airports Association; and Senior Manager Transport Policy for the Federation of German Industries. Thomas also worked as Scientific Advisor to a member of the German Parliament.

Thomas holds a degree in transport engineering of the Technical University of Berlin and has been working on international transport policy projects since graduating in 2000.

Pietro Caloprisco (FCH JU)

Pietro Caloprisco is a project officer at the fuel cells and hydrogen joint undertaking. There he follows the cluster of activities dedicated to the development and deployment of fuel cells solutions for HD applications. Pietro has previously worked in DG RTD in the Transport Directorate and in Transport & Environment, where he followed discussions linked to alternative fuels.