

Methanol as fuel & energy storage

A CO-ARRANGMENT BY ENERGIPORTALEN AND MOT-2030

March 17th 2015, 9.00 am – 6.20 pm

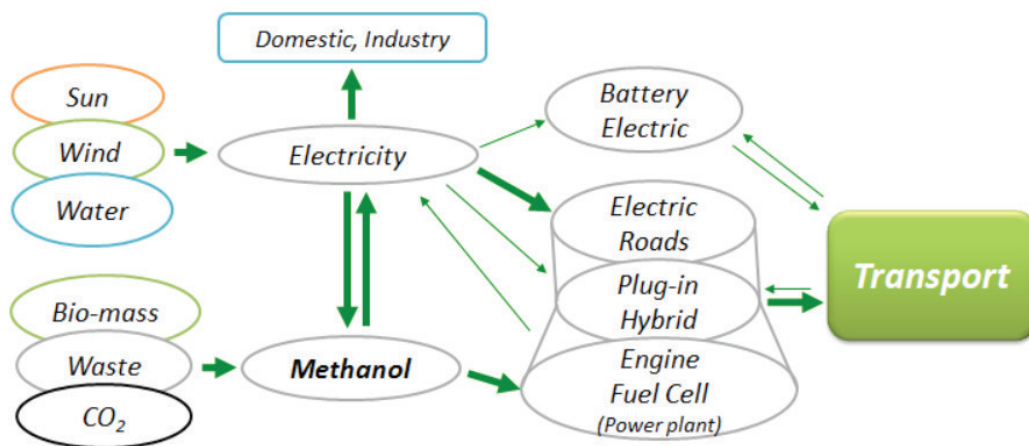
Venue: Stora Hörsalen, IKDC, Lund University, Sölvegatan 26, Lund

Sweden has the goal of a fossil fuel independent transport fleet by 2030. Replacing fossil fuels is an enormous and challenging undertaking with large implications on technical, societal, economical and environmental issues. Selecting the right systems and molecules is essential for success.

The small size of the methanol molecule makes it effective for energy storage of clean electricity, such as wind power, but also effective and clean as a fuel for combustion engines and fuel cells. The Royal Swedish Academy of Science concluded in 2012 that methanol is the best candidate for sustainable energy in the transport sector - Sweden can produce, every year, 30 TWh bio-methanol that with hybridization can replace the current 90 TWh fossil fuels.

The purpose of this seminar is to provide an open exchange of knowledge and ideas:

- What does recent research tell us about methanol as an energy carrier?
- Which are the main barriers with the introduction of methanol as an energy carrier?
- How do we best exploit the methanol molecule for sustainable transportation?



Register before March 5

The workshop is free of charge and includes lunch and coffee. Register before **March 5** by sending a mail to Elna Andersson, elna.andersson@energy.lth.se. Please let us know if you wish to join the lab-tour.

Questions?

Contact Martin Tunér, martin.tuner@energy.lth.se or Max Åhman, max.ahman@miljo.lth.se

Energiportalen

LUNDS TEKNISKA HÖGSKOLA

MOT-2030

Highly Efficient Methanol Engine Systems
for Fossil Free Transportation 2030



Programme

9.00 Opening

Opening talk

Welcome – Introduction

Martin Tunér, Lund University

9.20 Prospects of Methanol as fuel & energy storage

Fossil Free Fleet in Sweden 2030 – reflections and priorities from a government investigation

Thomas B Johansson, Lund University

Methanol production technologies: today's and future renewable solution

John Bogild Hansen, Haldor Topsoe

10.15-10.30 Coffee break – networking

Policies and funding of alternative fuels

Gustav Tibblin, Södra

Methanol production from biomass and intermittent power

Søren Højgaard Jensen, DTU Energy

Factors that determine climate benefits for methanol from a well to wheel perspective

Pål Börjesson, Lund University

11.35 Methanol – Safety, health and environment

Methanol as ship fuel – handling of safety matters

Ulf Freudendahl, MARU Teknik AB

Methanol as a fuel - exposure and possible Health risks

Håkan Tinnerberg, Lund University

12.25 Lunch

13.25 Methanol as an engine fuel – experiences, experiments and modeling

Experimental and numerical work at Ghent University on methanol combustion in SI engines

Sebastian Verhelst, Ghent University

The potential of methanol as a blend component to enable the evolution of decarbonized liquid fuels

James Turner, University of Bath

ED95 experiences and MD95 plans

Per Stålhammar, Scania CV AB

Methanol - the fuel of the future

Lennart Haraldsson, Wärtsilä AB

15.25 -15.55 Coffee break – networking

Aspects of alcohol modeling in combustion engines

Fabian Mauss, BTU Cottbus, Loge AB

Optical methods for combustion research

Mattias Richter, Lund University

16.55 Open discussion

17.25 – 18.20 Lab tour

