Welcome remarks:
Hans Jørgen Koch, Director NER

Norwegian Research Council, Oslo 1\textsuperscript{st} September 2016
Nordic Energy Research – established 1975

1. Platform for cooperative energy research
2. Fund R&D to promote sustainable and low-carbon energy solutions
3. Contribute to Nordic policymaking
4. Conduct energy analysis

Nordic added value
What is NETP?

Scenario for an energy-efficient and low-carbon Nordic society in 2050.
NETP 2016 - Three strategic actions

1. Incentivise and plan for a more distributed, interconnected and flexible energy system

2. Tap into the positive momentum of cities in transport and buildings

3. Ramp up decarbonisation of long-distance transport and the industrial sector
Global and Nordic scenarios in CO₂ emissions

In the Carbon-Neutral Scenario (CNS), Nordic CO₂ emissions drop by 85% in 2050 compared with 1990 levels.
Nordic CO$_2$ from energy

70% Transport, industry & other
30% Electricity & heat
Demand sectors most challenging

Nordic CO₂ emissions in the CNS

- Transport
- Industry, oil, gas and other transformation
- Power and heat
- Buildings (direct emissions)
Long-distance transport

Nordic demand for transport biofuels

2010 2015 2020 2025 2030 2035 2040 2045 2050
15% import dependency for biomass in 2050, up from 8% in 2013
A doubling of biomass output from Nordic forests is possible

Enerwoods project (SES 2050)
Actions

1. For national (and Nordic) policy makers

1. Public-private collaboration

2. International collaboration
Figure 1. Mapping out the industry commitments

Source: ATAG, 2013
Welcome
Recommendations to national policy makers

• Targeted strategies are needed to kick start and develop a market for sustainable fuel alternatives in the Nordic countries.
• Tie economic benefits to the use of sustainable jet fuel in order to reduce the cost differential.
• Prioritization of national biomass resources into sectors.
• Specific targets for the share of RES in aviation on global, European and Nordic level in order to create streamlined incentive structures.
• Co-processing with existing facilities, especially oil refineries.
Enhancing public-private collaboration

1. Realize specific production pathways with a strong lead partner.
2. Promote collaboration between the forestry industry and R&D institutions to utilize by-products and raw materials.
3. Assist start-up companies in the sustainable jet fuel value chain.
4. Increase transparency and lower the risk in investing in sustainable business models.
5. Explore new, sustainable business models for sustainable jet fuel supply chains to lower risk.
6. Loan guarantee mechanism for producers of sustainable jet fuels, in order to secure transition investment capital.
Recommendations for international collaboration

1. Promote incentive structure for the use of sustainable jet fuel.
2. Promote globally applicable standards for sustainability.
3. Explore how to develop globally accepted mandatory blending levels.
Panelists

• Ove Myrvold, SAS
• Sari Tasa, Finnish Ministry of Economy and Employment
• Olav Mosvold Larsen, Avinor
• Virpi Krøger, Neste Oil
• Anne Grete Holmsgaard, Biorefining Alliance
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