NISA
Nordic Initiative for Sustainable Aviation

- **A more sustainable aviation: Four phases**
  - Adjust and approve the use of fossil fuel
  - Bio- and synthetic alternative fuels, (sustainable)
  - Electrofuels (based on renewable energy)
  - Electric aircraft
    - Combinations, hybrids, transitions + maybe some not discovered yet…..

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- Dealing with a lot of challenges regarding best technologies, costs, feedstocks, and also there are difficult issues like approvals, certification issues, sustainability criteria, national and international framework, CORSIA, ETS, advanced biofuels, ILUC and much more.

- Aviation can compensate for their growth in CO2 emissions and leave it to others to reduce emissions, but the real long-term solution is that aviation, with help from developers and manufacturers, on its own will manage to reduce emissions.

- DTU, NER and NISA invited interesting players on the development arena, - producers, developers and researchers from the Nordic countries and inspiration and inputs from international representatives.

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Todays 4 sessions:

- **Opening session –**
  - status/overview on SAF activities, decisions, conditions !
- **Pilot projects & Initiatives –**
  - actual projects and activities taking place/ Nordic
- **Technology solutions –**
  - **f**uture production possibilities, newest research etc
- **Discussions and networking –**
  - filled up with impressions and curiosity…. wrap up + recommendations

NISA

Nordic Energy Research

DTU Chemical Engineering
Department of Chemical and Biochemical Engineering

Nordic SAF -leadership? Policies – Technology options, Research needs & Markets

Sustainable Aviation Fuel - Workshop 2018:
Date: Tuesday, 20th November, 2018, - Time: 09:30 to 17:00
Venue: Nordens Hus, Ved Stranden 18, Copenhagen K - 1061, Denmark.

Opening session – Moderator Martin Porsgaard
09:30 Welcome by Svend Søyland NER, Nordic Energy Research
09:35 The Nordic SAF outlook by Martin Porsgaard, NISA
09.40 Introduction by Heriklia Gavala, Associate Professor, DTU
09.50 Aviation and climate challenges Denmark by Per Henriksen, Danish Aviation
10:00 Islandic Views regarding SAF possibilities by Jón Bernódusson, Islandic Transport Authority
10:10 Swedish SAF investigation process and plan by Maria Wetterstrand, appointed by Swedish Government
10:30 Global SAF initiatives: EU RED II, CORSIA, Airbus and Boeing by Frederic Eychenne + Claire H. Guilhot

10:55 – Coffee Break

11:10 Facing the challenge: Decisions, visions and projects in Norway by Olav Mosvold Larsen, Avinor

Pilot projects & Initiatives – Moderator Anker Degn Jensen, DTU
11:25 Sustainable Biorefining Platform by Lasse Rosendahl, Aalborg University
11.40 SAS/PREEM Sustainable Aviation Fuel agreement and project by Sören Eriksson, PREEM
11:55 Catalytic Pressureless depolymerization by JP Morgan Friberg, Swentep
12:10 Production- and delivery-solutions from Neste, Finland by Virpi Krüger
12:25 Production- and delivery-solutions from AirBP by Thorbjörn Larsson
12:40 Haldor Topsøe views on Sustainable Aviation Fuels by Jostein Gabrielsen + Sylvain Verdier

12:55-13:45 – Lunch/networking

SAF technology solutions – Moderator Thomas Petersen, Aalborg University
13:45 Catalytic hydro pyrolysis for Sustainable Aviation Fuel by Anker Degn Jensen
14:00 Biomass gasification as a pathway for Sustainable Aviation Fuel by Jesper Ahrenfeldt
14:15 Electrofuels/RE- Fuels/Power to X by Peter Holtappels
14:30 Bio-refining with focus on Biomanufacturing for SAF by Heriklia Gavala
14:45 Biobutanol as production pathway by Helena Junicke
15:00 CERE Computer Aided Design by Georgios Kontogeorgis

15:15 – Coffee Break/networking

16:00 Discussion and questions on presented solutions, - by the moderators
16:30 Considerations/inputs from producers, buyers and investors, moderated by Erik Wormslev
16:45 Today's Highlights, wrap up and recommendations by Erik Wormslev, NIRAS and Robert Arendal
17:00 End of Program