

**MONDAY 14<sup>TH</sup> MAY 14:30 - 18:00 - Room 18****Danish bioenergy solutions and Denmark as testing ground****Agenda****14:30 – 14:45 - Welcome and introduction to the Danish bioenergy cluster**

Michael Persson, Head of Secretariat, DI Bioenergy

**14:45 – 15:00 - The role of biomass in the Danish energy transition**

Martin Hansen, Deputy Director General, Danish Energy Agency

**15:00 – 15:45 - ADVANTAGES OF DEVELOPING BIOENERGY IN DENMARK – THE DANISH BIOENERGY ECO-SYSTEM****INBIOM – Innovation Network for Biomass**

Jacob Mogensen, Network Manager, INBIOM

**State of Green – Presentation of Danish solutions**

Martha Marriner, Project Manager, State of Green

**Invest in Denmark / Copenhagen Capacity / Invest in Skaane**

Djouhara Oualli Westberg, Business Development Manager &amp; Lin Na, Investment Advisor

**Funding opportunities within R&D in Denmark**

Katharina Paarup Meyer, Advisor, Energy Technology Development and Demonstration Programme

**Technology case - Technology testing in Denmark**

Mich Hein, CEO, Electrochea

**Investment case – Compelling Growth and Key Challenges**

Sam Abboud, partner, Pioneer Point Partners

**15:45 – 16:15 - Coffee break****16:15 – 17:55 - DANISH BIOENERGY SOLUTIONS****Newest advances in Waste-to-Energy**

Thomas Norman, R&amp;D Manager, B&amp;W volund

**Bioenergy in industry**

Jens-Ole Aagaard Jensen, CEO - Managing Director, Focus Bioenergy

**Combustion technologies services**

Kristian Lykkemark, Head of Department, FORCE Technology

**Gasification in power and heat**

Jens Dall Bentzen, Managing Director, Dall Energy

**High-efficiency biomass CHP plants**

Flemming Skovgaard Nielsen, General Manager, Boiler, BWSC

**100% green gas in Denmark in 2035**

Ole Hvelplund, CEO, Nature Energy

**17:55 – 18:00 - Closing remarks****Organised by**

## PARALLEL EVENTS

TUESDAY 15<sup>TH</sup> MAY 12:30 - 15:30 - Room 18

### Sustainability and governance of bioenergy supply chains

*Presentation of results of the IEA Bioenergy Inter-task project on "Measuring, governing and gaining support for sustainable bioenergy supply chains"*

Sustainability of liquid and solid biofuels production is under continued scrutiny, including topics such as iLUC, food vs. fuel, forest carbon accounting and sustainable forest management principles. Sustainability criteria and metrics differ between feedstock and final end use (road transport vs. heat & power, size of end-use, no criteria for aviation, shipping & materials yet). At the same time, the public debate on bioenergy is heated, partly due to different views on governance, and the partial or perceived failure of systems to ensure the sustainability of bioenergy supply chains. Obviously, definitions of 'sustainable bioenergy' also depend on different views and perceptions of stakeholders, both within and outside the value chains, and this may confuse the discussion. To address the respective challenges, the IEA Bioenergy inter-task project on "Measuring, governing and gaining support for sustainable bioenergy supply chains" is pursuing three main objectives:

- To provide an overview and examples of calculation methods & tools to assess the sustainability of various biomass and bioenergy supply chains and discuss needs, possibilities and limitations of global, uniform/harmonized framework.
- To compare and assess the legitimacy, including effectiveness and efficiency of a variety of approaches on how to govern and verify sustainability of biomass and bioenergy supply chains in different conditions.
- To understand the positions and underlying motivations of stakeholder groups relative to their perceptions of bioenergy and inform dialogues/discussions to avoid misconceptions and gain trust in bioenergy.

This project was started in mid-2016, and under the three objectives, a multitude of studies have been initiated, focusing largely on agriculture, forestry and biogas. These have now yielded results to be shared and discussed with participants of EUBCE 2018.

Given the ongoing discussions on sustainability and governance of bioenergy supply chains in the RED-II negotiations, the aims of this side event are two-fold:

- To share project results of the work carried out on governance and stakeholder involvement with an audience from industry, policy, science, and civil society.
- To discuss existing and new approaches for governance – the way forward.

### Agenda

**12:30 – Welcome & Introduction**, Kees Kwant, IEA Bioenergy

**12:40 – The IEA Bioenergy Vision on Sustainable Bioenergy**, Uwe R. Fritsche, IEA Bioenergy Task 40 & IINAS, Germany, with contributions from

- Thuy Mai-Moulin: supranational stakeholder views on sustainable bioenergy
- Daniela Thrän and Kay Schaubach: The case of biogas in Germany
- Evelyne Thiffault: Stakeholder perception on La Tuque biorefinery, Canada

**13:30 – Panel Discussion: Towards a Joint View on Bioenergy's Future.**

Moderator: Martin Junginger

Panelists to be announced (some may participate via web):

**14:00 – Voices from the plenary**

**14:15 – Governing Sustainable Bioenergy: Messages from CPH Conference**, Inge Stupak, IEA Bioenergy Task 43 & CPH University

**14:30 – call-ins (to be announced)**

**15:00 -Panel Discussion: New Approaches for Governance – the Way Forward?**

Moderator: Göran Berndes, IEA Bioenergy Task 43 & Chalmers University

Panelists to be announced

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## PARALLEL EVENTS

TUESDAY 15<sup>TH</sup> MAY 13:30 - 16:45 - Room 16

### Sino-Europe Low-Carbon Integrated Waste Management Seminar

Based on the "first two year update of climate change in People's Republic of China (2016)", 1.3% of the total Chinese CO<sub>2</sub> emissions originate from the waste sector, amounting to 158 Mt CO<sub>2</sub>e. By 2025, China's rapid urbanisation is expected to reach 1 billion urban citizens and, subsequently, to an estimated annual emissions reduction potential from Municipal Solid Waste (MSW) of 236.3 Mt CO<sub>2</sub>e.

With its Nationally Determined Contribution (NDC), China pledges to achieve the following by 2030: reduce CO<sub>2</sub> emissions per unit of GDP by 60-65% based on 2005 levels, increase the share of non-fossil fuels in primary energy consumption to around 20% based on 2005 levels.

Following its development targets and its NDC towards a low-carbon society, China is strengthening its efforts to reduce GHG emissions and increase the usage of urban waste for the production of energy. The China Integrated Waste Management NAMA (IWM NAMA) has been commissioned by NAMA Facility1 and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) since September 2017, to induce changes within the sector that go beyond the improvement of waste management and set the basis for a transformative change in the sector. Changes will be made through technical assistance to support the implementation of IWM systems in (at least) three demonstration municipalities, policy advice, tailor-made capacity building and the mobilisation of the private sector and public investment in the replication of the demonstrated integrated solutions in other municipalities.

EUBCE is the most important international conference in the field of biomass. For more than 30 years, it has been committed to research and development and served as an annual meeting place for biomass professionals. This time, the "Sino-Europe Low-Carbon Integrated Waste Management Seminar" will be jointly organised by EUBIA, ETA and GIZ IWM NAMA project, as an important event of EUBCE to promote the exchange between the Chinese and European waste management industries, especially exploring low-carbon waste integrated management.

### Agenda

**13:30 - Opening address**

**13:40 - China Integrated Waste Management NAMA - Initiation of low-carbon waste management in China**

**14:00 - Development of MSW low-carbon management in Germany**

**14:10 - The clean waste to energy technology in Denmark**

**14:30 - Coffee break**

**14:50 – The policy of integrated waste management in Europe**

**15:10 – The development and influence of waste segregation in Germany**

**15:30 – The BAT and BEP in the field of solid waste utilization**

**15:50 – Panel discussion**

**16:30 - Closing Session**

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## PARALLEL EVENTS

THURSDAY 17<sup>TH</sup> MAY 09:00 - 13:00 - Room 18

### Increase in Reduction and Recovery of Expired Food – i-REXFO under EU LIFE

i-REXFO presents a two-sided event with two different sessions. The first session is about gaining knowledge on Danish experiences with handling food waste and using bio waste in the energy chain. The second session will focus on barriers and bottlenecks on an EU level, when handling food waste.

#### Agenda

**09:10 - Handling of food waste in Denmark and of the future of handling bio waste.**

Rasmus Helveg Petersen, former Minister of Development and of Climate and Energy

**09:30 - The Danish Food Bank**

Karin-Inger Thorsen, Director Danish Food Bank

**10:30 - Danish Agriculture and Food's experience regarding handling bio waste.**

Marianne Gregersen, Head of Department Market Analysis and Consumer Economy, Danish Agriculture and Food Council

**11:00 - Break and networking**

**11:15 - Introducing i-REXFO**

Professor Ing. Ph.D Francesco Fantozzi, Department of Engineering - University of Perugia.

**11:30 - Working with reducing food waste in a European perspective.**

Angela Frigo, Secretary General European Food Banks Federation

**12:00 - Barriers and bottlenecks of handling EU regulatives regarding food waste.**

Balázs Cseh, Board member of FEBA and President of Hungarian Food Bank

**12:20 - Handling food waste from more than 1200 stores in Denmark in align with EU regulations**

Massimo Forti, MiljøLogistik.

**12:45 - Questions and following up on the debate.**

**13:00 - 14:00: Networking lunch**

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## WORKSHOPS

MONDAY 14<sup>TH</sup> MAY 14:00 - 18:00 - Room 19

### EU Policy and Industry perspectives on Biofuels in a global context

Biofuels constitute one of the key pillars in the efforts for sustainable economic development and significantly contributes to the mitigation of climate change. The aim of this workshop is to promote the dialogue between the European Industry of Advanced Biofuels, the EU Policy-makers and the related institutions. The key objective is to communicate the capabilities and the needs of the relevant industry under the global perspective of the wider deployment of the Advanced Biofuels and to highlight the opportunities and threats stemming from the policy framework. International organizations active in the field will participate: IRENA, FAO, IEA, ETIP-Bioenergy.

The Workshop is structured in two sections. The first part comprises presentations from ART Fuels and International Organizations on the global dimension of the Advanced Biofuels, while during the second part a moderated panel discussion will take place among representatives of the sustainable, advanced, alternative and renewable transportation fuels (ART Fuels) industry, focusing on the benefits and market uptake potential of the ART-Fuels.

The event will conclude with a discussion with the audience and a Q&A session.

The event is organized by the ART Fuels Forum, which brings together more than 100 experts representing the value chain for Alternative Renewable Transportation fuels and facilitates discussions on policy and market issues for these fuels.

#### Agenda

**Introduction to the event**

**14:30 – Welcome – Short Introduction to the ART-Fuels Forum Project and the Workshop**

Chairmen: K.Maniatis, T.Goumas

**14:40 – The Global Dimension of Advanced Biofuels**

**Availability of resources**, O. Dubois, FAO

**Recent findings from IRENA studies**, J. Skeer, IRENA

**The 2017 Bioenergy Roadmap**, P. Frankl, IEA

**Technology Needs in Advanced Biofuels**, A. Arasto, ETIP-Bioenergy

**Policy Needs and Industry Perspectives**, E.Van den Heuvel, AFF

**15:30 – Panel discussion on benefits and market uptake potential of the ART-Fuels in the global context**

Moderator: David Chiaramonti, ART Fuels Forum

Panellists:

Anselm Eisentraut, Neste Oy

Marko Janhunen, UPM

Marie-Helene Labrie, Enerkem

Nour Amrani, Novozymes

Paolo Corvo, Clariant

**16:15 – Discussion with the audience and Q&A session**

**16:50 – Conclusions (chairmen) & Closure of the event**

Theodor Goumas

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## SEEMLA – Sustainable exploitation of biomass for bioenergy from marginal lands in Europe

Project n°691874 – Horizon2020

The main objective of the H2020 funded EU project SEEMLA (acronym for Sustainable Exploitation of Biomass for Bioenergy from Marginal Lands in Europe) is the establishment of suitable innovative land-use strategies for a sustainable production of plant-based energy on marginal lands while improving general ecosystem services. The use of marginal lands (MagL) could contribute to the mitigation of the fast growing competition between traditional food production and production of renewable bio-resources on arable lands.

SEEMLA focuses on the promotion of re-conversion of MagLs for the production of bioenergy through the direct involvement of farmers and forester, the strengthening of local small-scale supply chains, and the promotion of plantations of bioenergy plants on MagLs. Life cycle assessment is performed in order to analyse possible impacts on the environment and a soil quality rating tool is applied to define and classify MagL. Suitable perennial and woody bioenergy crops are selected to be grown in pilot areas in the partner countries Ukraine, Greece and Germany: the SEEMLA approach will be developed taking into account sustainability parameters, biomass productivity, economic balance, technical and financial resources for biomass exploitation, plant characteristics, and accessibility.

Furthermore, during the whole project, regional stakeholders will be considered to refine the approach and to increase awareness of local supply chain actors.

SEEMLA is expected to contribute to an increasing demand of biomass for bioenergy production in order to meet the 2020 targets and beyond.

For more information: [www.seemla.eu](http://www.seemla.eu)

### Agenda

#### 13:15 – Welcoming

Chair: Diego Mattioli, Legambiente Onlus

#### First Panel: the Seemla perspective

#### 13:30 – Sustainable exploitation of biomass for bioenergy from marginal lands and its contribution to mitigate the risk of competition between bio resources and food security

Christiane Volkmann, FNR

#### 13:45 – Understanding Marginal Land

Vadym Ivanina, Institute of Bioenergy Crops and Sugar Beet, Ukraine

#### 14:00 – Environmental and socio-economic impacts of bioenergy from lignocellulosic crops cultivated on marginal land in Europe

Nils Rettenmaier, Institute for Energy and Environmental Research (IFEU)

#### 14:15 – Soil Quality Rating system & pilot cases implementation and Bioenergy production on MagL in pilot cases: reports from the Ukrainian, Greek and German case study sites

Dirk Freese (BTU)

Fotis Kiourtsis (DAMT)

#### 14:30 – SEEMLA approach development: the GIS application for MagL types availability

Spyros Galatsidas, Democritus University of Thrace

#### 14:45 – Questions & Answers

#### 15:00 – Coffee break

#### Second Panel: Bioenergy options for a cleaner environment

Chair: Diego Mattioli, Legambiente Onlus

#### 15:15 – Fostering sustainable feedstock production for advanced biofuels on underutilised land in Europe – FORBIO

Rainer Janssen, WIP Renewables Energies

#### 15:30 – MArginal Lands for Growing Industrial Crops, Turning a burden into an opportunity – MAGIC

Efi Alexopoulou, Greek Centre for Renewable Energy Sources and Saving (GRES)

#### 15:45 – GRowing Advanced industrial Crops on marginal lands or bioRefineries – GRACE

Andreas Kiesel, University of Hohenheim

#### 16:00 – BonRes SIGNAL – Sustainable intensification of agriculture through agroforestry in Germany, BONARES

Marcus Schmidt, Universität Göttingen

#### 16:15 – Cultivation of energy crops on former mining sites in Vietnam

Fabian Stolpe, Independent Institute for Environmental Issues (Ufu)

#### 16:30 – Questions & Answers

#### 16:45 – Coffee break

#### Third Panel: the role of bioenergy in the European policy context

Chair: Nils Rettenmaier, Institute for Energy and Environmental Research (IFEU)

#### 17:00 – Policy and administrative regulations for biomass production on MagL for bioenergy: the proposals coming from the SEEMLA approach

Christiane Volkmann, FNR

#### 17:15 – Maria Georgiadou, European Commission, DG Research & Innovation

#### 17:30 – Open discussion

#### 18:30 – Conclusions

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**Getting (some) numbers right – derived economic indicators for the bioeconomy**

New indicators describing the evolution of the bioeconomy are being developed. E.g. turnover, value added, jobs, investments for specific bio-based sectors. The JRC has published different indicators and the methodology applied (Research Brief 2017). The EUBCE, as the main gathering of experts in the bioeconomy is the right forum to discuss and compare key indicators.

**Agenda****15:15 – 15:45 Background of the workshop and introduction**

Chair: Robert M'barek, European Commission, Joint Research Centre

**Welcome and background of the workshop**, Robert M'barek, European Commission, Joint Research Centre

**State of play of the European Bioeconomy and bio-based industry**, Tomasz Calikowski, European Commission, Research and Innovation

**Which are the key economic indicators? EU perspective**, Markus Lier, LUKE

**15:45 – 17:15 Economic indicators of the EU bioeconomy**

Chair: Robert M'barek, European Commission, Joint Research Centre

**Economic indicators for 28 EU MS**, Tevecia Ronzon, European Commission, Joint Research Centre

**Economic indicators for Germany**, Susanne Iost, Thuenen Institute

**Economic indicators for Poland**, Jan Stanilko, Ministry of E&T

**Economic indicators for Spain**, Rocio Lansac, INIA

**Economic indicators for Finland**, Markus Lier / Martti Aarne (LUKE)

**Industry viewpoint**, Evelyne Dollet, FoodDrinkEurope

**Panel discussion: How to harmonise data approaches on European level? Turnover and value added.**

all speakers

**How to regionalise data? With impulse presentation**, Piotr Jurga, IUNG Pulawy

**17:15 – 18:30 Economic indicators of an emerging sector: bio-based chemicals**

Chair: Robert M'barek, European Commission, Joint Research Centre

**Economic indicators of bio-based chemicals – preliminary results of a research study**,

Claudia Parisi, European Commission, Joint Research Centre, Jurjen Spekrijse, BTG

**Indicators for the Netherlands**, Kees Kwant (tbc)

**Panel discussion**

All speakers, incl.

Tomasz Calikowski, European Commission, Research and Innovation

Eleni Zika, BBI-JU

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European Commission  
Joint Research Centre

**Bioeconomy trends in developing countries**

The Natural economy is characterised by subsistence farming and traditional biomass use with minimal technological inputs and low productivity, generally leading to ecosystem degradation as the population grows. The Fossil economy is primarily based on non-renewable resources and characterised by high levels of material consumption in relation to income and/or other measures of well-being. The Bioeconomy relies on renewable resources to produce food, energy, products and services while minimising biodiversity loss and ecosystem degradation. In most low-income countries, the natural economy is still significant while high-income economies rely heavily on the fossil economy even as they aim to develop the bioeconomy. The bioeconomy spans many different sectors of economic activity and differs widely across regions; consequently, enabling policies and institutions are quite heterogeneous. In terms of governance, in the global North, the bioeconomy is normally aligned with climate mitigation policies or strategies. In the global South bioeconomy strategy is more likely to follow a "development first" approach. More than 40 countries have developed bioeconomy strategies and/or are promoting an expanded role for bio-based economies. There is tremendous diversity in such strategies and there is no one-size fits all blueprint. This session aims to bring examples and views of bioeconomy in the Global South focusing on the value chains and different governance forms.

**Agenda****15.30 - Welcome coffee and introduction to the session**

Dr. Francis Johnson, Research Fellow Stockholm Environment Institute

**15.45 - Global bioeconomy view**

Dr. Martin Junginger, Professor Bio-Based Economy, Energy & Resources, Copernicus Institute of Sustainable Development, Utrecht University

**16.00 - Bioeconomy trends in Latin America**

Prof. Suani Coelho PhD, Research Group no Bioenergia GBIO, Institute of Energy and Environment, University of São Paulo

**16.15 - Bioeconomy trends in Asia**

tbc

**16.30 - Bioeconomy trends in Africa**

Dr. Rocio Diaz-Chavez, Deputy Director, Energy and Climate Change Programme Leader, Stockholm Environment Institute Africa Centre

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Stockholm Environment Institute African Centre

**Bioenergy towards 2030***Needs and opportunities for research and innovation to meet the targets for the next decade*

In the current year, a series of EU policy initiatives will shape the post-2020 environment for renewable energy and advanced renewable fuels. Besides the negotiations on the Renewable Energy Directive, the plan for the implementation of Action 8 (Renewable fuels and bioenergy) of the EU Strategic Technology Plan (SET-Plan) will be defined. In addition, the preparatory work for the elaboration of the post Horizon 2020 Research and Innovation programme is progressing, and a first proposal for FP9 is expected shortly after the final details of the EU Multiannual Financial Framework (MFF) are agreed (in early 2019) to be available in a short time. The event will inform about the role of bioenergy in the scenario of the EU Energy Union, the SET-Plan implementation, and the current status of the for the planning of the new EU programme for research and innovation related to renewable energy (FP9). A final panel of experts will discuss the outlook and the priorities for bioenergy in the European research and innovation agenda towards 2030.

**Agenda**

**Chairpersons:** Patrick Klintbom, Chair ETIP Bioenergy Platform, Antti Arasto, Vice Chair Steering Committee ETIP Bioenergy

**13:30 - Welcome and registration**

**13:45 - Introduction** - Patrik Klintbom, Chair Steering Committee ETIP Bioenergy

**14:00 - The Energy Union, the SET-Plan and Framework Programmes : opportunities and needs for research, development and innovation in bioenergy** - Maria Georgiadou, European Commission, DG RTD

**14:20 - An updated Strategic Research and Innovation Agenda for bioenergy** - Birger Kerckow, FNR, Germany

**14:35 - Inputs for advanced biofuels potential from the DG RTD study "Research and Innovation Perspective of the Mid- and Long-term Potential for Advanced Biofuels in Europe"** – Thomas Schleker, European Commission DG RTD

**14:55 - The need for biocommodities to link the available biomass potential to the European feedstock and fuel needs in the coming decades** – Wolter Elbersen, Wageningen University of Research.

**15:10 - Insights on biofuel innovation from IRENA's patent database** - Jeffrey Skeer, IRENA

**15:25 - EERA Bioenergy Joint Research and Development Programmes, status and vision towards 2030** - Juan Carrasco, EERA Bioenergy Joint Programme Coordinator

**15:40 - BESTF/ERA-Net Bioenergy Joint Research and Development Projects- status and vision towards 2030** - Kees Kwant, ERA-Net Bioenergy

**15:55 - Towards FP9: the views from research centres and universities in renewable energy**, Rainer Janssen EUREC

**16:10 – Question time**

**16:20 - Panel debate and open discussion – What outlook and which priorities for bioenergy in the European research and innovation agenda towards 2030?**

**Moderator:** Antti Arasto (VTT/ETIP Bioenergy)

**Panellists:** Rainer Janssen, (EUREC), Maria Georgiadou (DG RTD), Kees Kwant (BESTF/ERA-Net Bioenergy), Wolter Elbersen (Wageningen UR)

**17:00 Concluding remarks**

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**Production and utilisation options for Solid Recovered Fuels**

In the circular economy, the production and utilisation of Solid Recovered Fuel (SRF) is increasingly recognised as an important element in waste management practises. SRF is produced from non-hazardous waste from biological and fossil origins and can therefore be regarded as a partly renewable fuel. It usually has undergone a sorting process and therefore delivers a fuel that meets strict quality requirements. Narrow specifications of the fuel allow for more targeted end user applications, thereby benefitting the economic and environmental performance.

Recently there have been several new experiences in the production and use of SRF. This workshop provides and update in the potential market volumes of SRF, policy developments and experiences of market actors involved.

**Agenda**

**09:00 – Opening**, Jaap Koppejan, IEA Bioenergy

**09:10 - Role and markets for SRF**, Geert Cuperus, ERFO

**09:30 – Is there an added value in SRF compared to integral waste processing?**, Bettina Kamuk, Rambøll

**09:50 – Standardisation of SRF (ISO TC 300)**, Mikko Talola, Chair, ISO TC 300

**10:10 - Coffee break**

**10:30 - Legislative status and the economy balance of SRF utilisation plants**, Mathilde Le Bihan, RDC environnement

**11:00 - Waste pretreatment for gasification, study from IEA Bioenergy Task 36**, Dieter Staph, Karlsruhe Institute of Technology (eller KIT) and Giovanni Ciceri RSE S.p.A.

**11:20 - The Recombio project**, Hans-Joachim Gehrman, Karlsruher Institut für Technologie (KIT)

**11:40 - SRF, key for a sustainable cement industry**, Jan Theulen, Heidelberg Cement

**12:00 - Lunch break**

**13:00 - Feasibility of SRF based liquids as oil refinery feedstock**, Outi Teras, NESTE

**13:20 - Industrial SRF combustion**, To be confirmed

**13:40 - Combustion of waste derived fuels in a large CFB boiler**, Peter Karlsson, Mälarenergi

**14:00 - SRF gasification using the Milena-Olga technology**, Jan-Willem Könemann, Dahlman Renewable Technology BV

**14:20 - Waste gasification - beyond two-stage incineration**, Lars Waldheim, Waldheim Consulting

**14:40 - Coffee break**

**15:00 - SRF CFB gasification / the Rüdersdorf reference**, Jochen Grünig, Outotec

**15:20 - Panel discussion**

**15:40 - Closing**

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Task 32: Biomass Combustion and Cofiring  
Task 33: Gasification of Biomass and Waste  
Task 36: Integrating Energy Recovery into Solid Waste Management Systems

## WORKSHOPS

THURSDAY 17<sup>TH</sup> MAY 09:00 - 10:30 - Room 17

NOTES 

### Sustainable Biomass using the Nordic Forestry Model – Potentials and Climate benefits

The Nordic countries, not least in Sweden and Finland, have a long-standing experience in using biomass from forestry and forest industry for energy, for district heating and power production, and for industrial heat. In the coming years production of second-generation biofuels from forest biomass is also expected to increase rapidly.

The use of bioenergy accounts for 37 per cent of final energy use in Sweden. Supply chains and technology has been developed to increase efficiency and cut costs.

Substitution of fossil fuels and materials with high carbon footprint give a climate benefit of 0.5 – 0.7 tons CO<sub>2</sub> emissions reduction per cubic meter of harvested wood, according to recent studies. The carbon balance of the forest system is clearly positive, as the standing stock of wood has double over the last 100 years. The growth and sequestration of CO<sub>2</sub>, has increased year by year. Yet, at the same time harvesting has increased. There is still potential to increase production and use of biomass from the forests.

At the seminar, we discuss de climate benefit of using the Nordic forestry model for bioenergy, and what lessons can be learned by other countries in Europe and in the boreal region.

### Agenda

#### Chair

Gustav Melin, Swedish Bioenergy Association

#### Speakers:

Jeffrey Skeer, IRENA

#### Climate benefits from Swedish biomass use for energy and material

Kjell Andersson, Swedish Bioenergy Association, Sweden

#### Forest resources of nations in relation to human well-being

Pekka Kauppi, Helsinki University, Finland

#### Mobilisation of bioenergy as a strategy to vitalise forestry in Canada

Evelyne Thiffault, Laval University, Wood and Forest Science, Canada

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