



## IEA-IETS Task XI on Industry-Based Biorefineries for Sustainability

### First Intra-Task Meeting

Slottsskogen - Room Number 2324 - 3rd floor  
Vasa 2 Building, Chalmers University of Technology

Held in conjunction with the IETS Conference, Göteborg Sweden

8 May 2023 | 8h30-17h00 CET

### Meeting Context

IETS-Task XI is part of IETS, focusing on applying systems-oriented tools and methodologies to address critical issues related to the development of **Industry-Based Biorefineries Towards Sustainability**, with the goal of achieving radical GHG emissions reduction. An emphasis is placed on cross-sectoral case studies and synergies creation along the production value chains, taking into account evolutions of biorefinery technologies, and policy landscapes.

More specifically, Task XI has recently established three new Sub-Tasks:

- (1) Decision support systems and ex-ante research for assessing biorefineries;
- (2) Technology pathways towards net-zero/negative emission biorefineries; and
- (3) The circular bioeconomy and biomass-oriented industrial symbiosis.

On the day prior to the IETS conference – Monday 8 May - Task XI on Industry-Based Biorefineries is assembling sub-task participants and other guests in a common meeting, for our first **Intra-Task Working Meeting**. You will have the opportunity to learn about some of the key issues being addressed at the project level across the Sub-Tasks, and identify potential synergies between the biorefinery-related subject areas. You will also learn about the network of participants involved in Task XI, be able to identify the potential value proposal from your participation and be able to assess how your organization may be interested in becoming.

The response to the Intra-Task Working Meeting has resulted in a really great program, summarized below. At the heart of the day will be short (5-10 minute) presentation of biorefinery-related projects from 9 different countries. This will be followed by presentations of the three sub-tasks, and finally those present will have the opportunity to associate with the sub-tasks of greatest interest to them.

This is a budget-free activity. Coffee will be available until it is depleted, and then we will gather together to network over lunch at a nearby restaurant, Wijkanders.

We look forward to your participation.

## IETS Task XI Intra-Task Meeting - Agenda

	Agenda Item	Facilitator - Speaker
8h30-9h00	Overview of Task XI Roundtable Introductions	Paul Stuart Polytechnique Montréal (Canada)
9h00-10h00	Project Presentations	Invited Speakers (see table below)
10h00-10h30	Questions and Discussion	
10h30-11h30	Project Presentations	Invited Speakers (see table below)
11h30-13h00	Lunch together at Wijkanders ( <a href="https://wijkanders.se/en/restaurangen/">https://wijkanders.se/en/restaurangen/</a> )	
13h00-14h00	Project Presentations	Invited Speakers (see table below)
14h00-14h30	Questions and Discussion	
14h30-15h30	Project Presentations	Invited Speakers (see table below)
15h30-16h30	Overview of 3 Task XI Sub-Tasks	Sub-Task Managers: (1) Jorge Costa, Circular Bioeconomy (2) Bettina Muster, Net Zero (3) Paul Stuart, DSS Ex-Ante
16h30-17h00	Sub-Task Selection	

## IETS Task XI Intra-Task Meeting – Projects

	Speaker / Affiliation	Presentation
9h00-9h10	<b>Christian Bang</b> Ea Energy Analyses (DK)	CCS/CCU/negative emissions and bio-based value chains/concepts
9h10-9h20	<b>Andrea Lanzini</b> DENERG Polito (IT)	Reaching net-zero cement production through carbon capture and waste/biomass integration
9h20-9h30	<b>Erik Furusjö</b> RISE (SE)	Mapping carbon flows in the Swedish forest-based bioeconomy
9h40-9h40	<b>Matty Janssen</b> Chalmers University of Technology (SE)	Results of a review of LCAs of CCU
9h40-9h50	<b>Andrea Ramirez Ramirez</b> TU Delft (NL)	Can we attain negative emissions in the industrial sector?
9h50-10h00	<b>Paul Stuart</b> Polytechnique Montréal and EnVertis (CA)	Net Zero strategies by 2050 for the Canadian forest products sector
10h00-10h30	<b>Questions and Discussion</b>	
10h30-10h40	<b>Matty Janssen</b> Chalmers University of Technology (SE)	Prospective LCA for decision making during biorefinery concept development
10h40-10h50	<b>Jorge Costa</b> Instituto Superior de Educação e Ciências - ISEC (PT)	Absorbing the Potential of Wood Waste in EU Regions and Industrial Bio-based Ecosystems
10h50-11h00	<b>Bettina Muster</b> Institut für Nachhaltige Technologien - AEE (AU)	HIPSTERS: Protein recovery from spent grain – potential aspects of this biorefinery concept; BioProfit: Biogas digestate valorization – biogas plants as add-on biorefinery concepts
11h00-11h10	<b>Jawad Elomari</b> SINTEF (NO)	Demonstrating sustainable value creation from industrial CO <sub>2</sub> by its thermophilic microbial conversion into acetone
11h10-11h20	<b>Jawad Elomari</b> SINTEF (NO)	Design and production of sustainable industrial packaging made of alternative lignocellulosic fibres
11h20-11h30	<b>Andrea Ramirez Ramirez</b> TU Delft (NL)	Assessing the potential and trade-offs of running chemical processes flexibly

11h30-13h00	<i>Lunch together at Wijkanders (<a href="https://wijkanders.se/en/restaurangen/">https://wijkanders.se/en/restaurangen/</a>)</i>	
13h00-13h10	<b>Patrice Mangin</b> UQTR (CA) and H2V Bioenergies (CA/FR)	<i>Finding solutions to issues of the industrial symbiosis for bioenergy projects</i>
13h10-13h20	<b>Antonis Kokossis</b> National Technical University of Athens (GR)	<i>Biorefineries in the context of circular economy &amp; the role of hydrogen as an integrator: from lignocellulosic to waste-based industries to upscale textiles, plastics, food, and municipal waste</i>
13h20-13h30	<b>Antonis Kokossis</b> National Technical University of Athens (GR)	<i>Methodological and systems challenges to explore sustainable paths and social engagement: from AI to ex-ante LCA and game theoretical methods</i>
13h30-13h40	<b>João Miranda</b> IPPortalegre, CERENA/IST (PT)	<i>A glance on the transition to circular bioeconomy: Promoting S&amp;T cooperation and training for bio-based industries</i>
13h40-13h50	<b>Ingrid Nohlgren</b> Chalmers University of Technology (SE)	<i>f3 Innovation cluster for sustainable transport biofuels – a Swedish network for increased knowledge and use of biofuels</i>
13h50-14h00	<b>Isabel Cabrita</b> Instituto Superior de Educação e Ciências - ISEC (PT)	<i>Sustainable aviation fuels</i>
14h00-14h30	<b>Questions and Discussion</b>	
14h30-14h40	<b>Simon Harvey, Henrik Thunman, Elin Svensson</b> Chalmers Institute of Technology (SE)	<i>Biomass for production of transportation fuels and platform chemicals – a Swedish perspective on future feedstock availability and inter-sectorial competition for a limited resource</i>
14h40-14h50	<b>Erik Furuşjö</b> RISE (SE)	<i>BIO-ELECTROFUELS – hybrid fuels for improved resource efficiency</i>
14h50-15h00	<b>Bettina Muster</b> Institut für Nachhaltige Technologien - AEE (AU)	<i>KPIs for combined resource and energy efficiency</i>
15h00-15h10	<b>Frank Lipnizki</b> Lund University (SE)	<i>Development of membrane applications in the concept of lignocellulose biorefineries</i>
15h10-15h20	<b>Emily Newes</b> National Renewable Energy Laboratory - NREL (USA)	<i>Bioeconomy Scenario Analysis</i>
15h20-15h30	<b>Virginie Chambost</b> EnVertis Consulting (CA)	<i>Creating Alignment and Evaluating Biorefinery Strategies Through MultiCriteria Analysis - Overview and Concretizing Example</i>
15h30-15h40	<b>Paula Teixeira</b> Instituto Superior Técnico (IST), University of Lisbon (PT)	<i>Calcium-rich algae incorporation into the cement industry</i>