ETSAP & IETS TCP WORKSHOP – FINAL AGENDA

Contacts: Etienne Bernier (etienne.bernier@polymtl.ca)
Anna Krook-Riekkola (anna.krook-riekkola@ltu.se)
Kathleen Vaillancourt, (kathleen@esmia.ca)
George Giannakidis (ggiannakidis.gg@gmail.com)

A 3.5h online workshop will be held on the topic of *Industrial Decarbonization through bioenergy and CO_2 capture and storage*, on October 7, 2026. The workshop is co-organized by two IEA Technology Collaboration Programs (TCP): the Industrial Energy-Related Technologies and Systems (IETS) and the Energy Technology Analysis System Programme (ETSAP). The workshop is part of a series that intends to foster dialogue between modelers and technologists with respect to specific industrial decarbonization technologies and themes. This will provide modelers with an opportunity to review their modelling assumptions for the industrial sector, and technologists with an opportunity to better grasp the context affecting the evolving attractiveness of specific industrial decarbonization technologies. This follows up an initial workshop held on April 10, 2025, for which more information can be found at https://iea-industry.org/events/event/joint-workshop-with-etsap/, and the first workshop of the current series on December 1, 2025 (petrochemicals, synfuels and CCU) for which more information can be found at https://iea-industry.org/events/event/joint-workshops-with-etsap-3/.

Agenda

Date October 7, 2026

Time: 7:30-11:00 EDT/13:30-17:00 CEST

Platform: MS TEAMS kindly provided by ESMIA Consultants Inc.

Moderator: Etienne Bernier, Natural Resources Canada

- 7:30 EDT/13:30 CEST: **Welcome Address**
  - Kathleen Vaillancourt
    ETSAP TCP Operating Agent and Founder and President of ESMIA Consultants, Canada
  - Johanna Mossberg
    IETS TCP Chair and Head of Bioeconomy Arena at RISE Research Institutes of Sweden
- 7:45 EDT/13:45 CEST: **TIMES Crash Course**
  Speaker: Florian Pedroli, ESMIA Consultants Inc.
  - Basics of the TIMES modelling platform
- 7:55 EDT/13:55 CEST: **Modelling basics for carbon removal through industrial BECCS**
  Speaker: Etienne Bernier, Natural Resources Canada

Agenda (continued)

Date: October 7, 2026

- 8:00 EDT/14:00 CEST: **Short presentations** on CCS and BECCS
    - 8:00 EDT/14:00 CEST: **Jitka Hrbek**

      IEA Bioenergy Task 33 Leader. Senior Scientist, University of Natural Resources and Life Sciences (BOKU) in Vienna (Austria)

      Biochar as a Carbon Storage Solution: Insights from IEA Bioenergy
    - 8:20 EDT/14:20 CEST: **José Ignacio Linares**

      Full Professor, Universidad Pontificia Comillas (Spain)

      The role of HYBECCUS in industrial decarbonization: application to refining and biomethanol production
    - 8:40 EDT/14:40 CEST: **Simon Moser**

      Key Researcher, Energieinstitut an der JKU Linz (Austria)

      Overview of IETS Task XXI Subtask "Carbon Capture in Industry"
- 8:50 EDT/14:50 CEST: 10-15 minutes break
- 9:05 EDT/15:05 CEST: **Short presentations** on CCS and BECCS focusing on Steel and Cement
    - 9:05 EDT/15:05 CEST: **James Glynn**

      Founder CEO, Energy Systems Modelling Analytics Limited (Ireland)

      Modelling Zero Carbon Steel Manufacturing in the United States
    - 9:25 EDT/15:25 CEST: **Daniele Ferrario**

      Post-Doc Researcher, Politecnico di Milano (Italy)

      Evaluating costs and environmental performance of CO_2 capture for heavy industry application: a comparison between calcium looping and amine scrubbing
    - 9:45 EDT/15:45 CEST: **Abdul'Aziz Aliyu**

      Technology Analyst, IEAGHG (United Kingdom)

      CCS and Bioenergy Pathways for Industrial Decarbonisation: Insights from IEAGHG Steel and Cement Studies

Agenda (continued)

Date: October 7, 2026

- 10:00 EDT/16:00 CEST: Open Discussion

  Moderator: Anna Krook-Riekkola, ETSAP

  - Are there synergies between biomass transformation and industrial processes, which might favor co-locating BECCS within existing industrial facilities? Are those synergies different when considering carbon removal through liquid and solid byproducts?
  - In net zero scenarios, is it more realistic to portray the whole of industry as a perpetual large emitter or as a potential net negative emitter? What bioenergy and CCS misconceptions cause divergent estimations?
  - Can heavy industry realistically secure long-term large supplies of biomass for BECCS, considering competing demands from other sectors, for nature-based climate solutions, and for objectives other than decarbonization?
  - Industrial CCS is most easily modelled by assuming end-of-pipe capture using amines and a standalone heat source. How much does that overestimate what future CCS costs may turn out to be?
  - How costly is retrofitting industry to accommodate low-grade fuel substitutes such as raw biochar (for coal), raw pyrolytic oil (for fuel oil) or raw syngas (for natural gas)?
- 10:55 EDT/16:55 CEST: Concluding remarks
- 17:00 EDT/17:00 CEST: End of workshop

Registration and participation

There is no registration process for this workshop. Simply join:
https://teams.microsoft.com/meet/260783580348369?p=7TMSWFqOqgKFG4QHY3

(Meeting ID: 260 783 580 348 369 Passcode: eE6w6s5Q)