



Side Event on cooperation across SET Plan Implementation Working Groups (IWGs)

'Integration of high temperature renewable heat sources and storage in industry'

10 November 2022 – 14:00 – 16:00

Format: Hybrid: in person in O₂-universum, Prague and via WEBEX (to be confirmed)
<https://ecconf.webex.com/ecconf/j.php?MTID=mad9947555f74ad381be1be41b72e3608>

This SET Plan Conference side-event will host a session on cooperation across several SET Plan Actions.

Preliminary cross thematic areas for cooperation were identified in October 2021 and three cooperation areas were confirmed during the Kick-off meeting of the IWGs Cooperation on 24 February:

- Area 1: *Integration of electrical renewable energy sources, flexibility and storage;*
- Area 2: *Integration of thermal renewable energy sources and storage, heat & cold management;*
- Area 3: *Circularity, Life Cycle Analysis, materials, advanced manufacturing.*

On 8 March 2022, the three areas for cooperation were further refined into sub-areas for cooperation.

This side event aims to share experience, to allow cross-fertilisation of ideas and reinforce interaction across the different IWGs, in one sub-area of area 2:

- *Integration of high temperature renewable heat sources and storage in industrial applications.*

The aims of the session are to:

- **present concrete European and National projects**, so as to **share knowledge** across IWG/technologies, as well as across borders;
 - five-minute presentations on innovative projects integrating renewable heat source with storage in industrial applications. What are the main technical benefits and challenges? How has the project resulted in a change of national regulations or hopes to change national regulations: the regulation name and reference, the actors, briefly what the project did and how it has affected/is affecting regulations.
- **hold a moderated discussion on the examples presented.**
 - What are the similarities and differences between the projects? How could these renewable heat and storage technologies be **transposed to other industrial processes and sectors**?
 - Which regulations are the most challenging, at which level – national or European? Understand the lessons from the projects and how to address these barriers.
- **identify where should European R&I go next considering**
 - the potential to transpose solutions demonstrated in one process to other industrial processes and sectors; to develop standardized modules performing functions common to several applications;
 - the natural gas supply shock and rising energy prices and the need to meet the challenge of the REPowerEU plan
 - what is the roadmap for industrial heat demand above 200°C: place all bets on electrification and hydrogen? What is the place of renewable thermal energy sources?

Contacts:

- Eric Lecomte, EC, DG Energy, eric.lecomte@ec.europa.eu
- Andrej Misech, coordinator of RHC-ETIP secretariat, misech@eurec.be

Registration: <https://ec.europa.eu/eusurvey/runner/SETP-IWGs-Side-Event-10Nov-registration>

Timing, see table below

14:00	<p>Cross-IWGs cooperation session, open to ETIPs and all Conference participants:</p> <p><i>Integration of high temperature renewable heat sources and storage in industry</i></p> <ul style="list-style-type: none"> • Introduction – 5' – Eric Lecomte – European Commission, DG Energy
14:05	<p>Presentation of projects or use cases – total 50'</p> <ul style="list-style-type: none"> • Geothermal heat generation and storage for industry – Gerdi Breembroek, RVA – (11' presentation + 4' Q&A) 15' <ul style="list-style-type: none"> ○ Brief overview of industrial geothermal applications ○ Project1: High temperature (160°C) geothermal for starch industry (agrofood) in Rittershofen, France, including extraction of Lithium from the geothermal brine ○ Project2: Deep geothermal for industry (~85°C) - Janssen Pharmaceutical, BE ○ Project3: Geothermica HEATSTORE: high temperature (~25°C to ~90°C) seasonal underground thermal energy storage (HT-UTES) for agriculture, Agriport, The Netherlands • Concentrated Solar for industry - Bérénice Crabs, Secretary General of ESTELA (European Solar Thermal Electricity Association) – (8' presentation + 4' Q&A) 12' <ul style="list-style-type: none"> ○ title “<i>How can Concentrating Solar contribute today to decarbonized and sustainable economy in Europe?</i>”, Brief overview of industrial concentrated solar applications ○ Project1: DAWN project for using concentrated solar thermal 250 kW to produce syngas and kerosene, in Jülich, Germany. ○ Project2: 30-MW concentrated solar power (CSP) plant being built to produce superheated water for a brewery in Seville, Spain • The perspective from the IWG on industry: use cases, including symbiosis; <ul style="list-style-type: none"> ○ <i>How can renewable heat integration, thermal energy storage, heat utilization, high temperature heat pumps contribute to reduce energy consumption and emissions in industrial sectors</i>, HighEFF, www.higheff.no, centre of excellence focusing on energy efficiency in industry, SINTEF, Norway, Petter E. Røkke, SINTEF – (5' presentation + 2' Q&A) – 7' ○ Project PréMa, manganese ore preheating with concentrated solar and flue gas heat recovery, Coordinated by SINTEF/ speaker SINTEF (tbc) – (5' presentation + 2' Q&A) – 7' ○ Joint working group with Paper Industry Association and the European Heat Pump Association, to develop a standardised compressor which is going to facilitate the integration of heat pumps in the paper industry - Małgosia Rybak, European Paper Industry Association, CEPI -(5' presentation + 2' Q&A) 7'
14:55	<p>Discussion including speakers and participants - 55'</p> <ul style="list-style-type: none"> • What are the benefits, challenges and difficulties of these technologies? • What is the potential to transfer these technologies to other industrial sectors? • Are there R&I gaps?
15:50	<p>Conclusion and next steps – 5'</p>
16:00	<p>End of side event</p>