



IEAGHG



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IEAGHG 10th High Temperature Solid Looping Cycles Network (HTSLCN) Meeting & CaLby2030 Project 2nd Dissemination Event

17th – 18th March 2026 - Kulturens Hus, Luleå, Sweden

ORGANISING COMMITTEE

Melisa Borre', EU CORE Consulting - borre@eucore.eu

Martina Fantini, EU CORE Consulting - fantini@eucore.eu

Paul Cobden, Swerim - paul.cobden@swerim.se

Matilda Boudin, Swerim - matilda.boudin@swerim.se

Carys Blunt, IEAGHG - Carys.Blunt@ieaghg.org

Jasmin Kemper, IEAGHG - jasmin.kemper@ieaghg.org

MennatAllah Labib, IEAGHG - MennatAllah.Labib@ieaghg.org

BACKGROUND

Day 1 - 10th HTSLCN meeting - 17th March 2026

The high temperature solid looping cycles network (HTSLCN) meeting covers technology developments in fields where a solid material is cycled between multiple reactors at elevated temperatures. The scope of the IEAGHG HTSLCN is to discuss recent progress in solid looping cycles such as calcium looping and sorption enhanced reforming for selective CO₂ transport and chemical looping combustion and reforming with selective oxygen transport by the solids. It brings together well-known technologies used in fluid catalytic cracking, circulating fluidized beds and combined cycles, in new ways, to increase efficiencies and provide opportunities to decrease the carbon footprint of energy intensive processes.

Day 2 - CaLby2030 project – 2nd Dissemination event - 18th March 2026

CaLby2030 is a European project granted under Horizon Europe framework programme. The main goal is to act as enabling tool to achieve, by 2030, commercial deployment of Calcium Looping technology (CaL) using Circulating Fluidised Bed reactors.

CaLby2030 project presentations will focus on decarbonization in iron & steel industries and will include a site visit to Swerim's CaL-CFB pilot plant, one of the project's demonstration sites.

ABSTRACT SUBMISSIONS

The Call for Abstracts for the 10th HTSLCN is now closed.

REGISTRATION

Registrations for the 10th HTSLCN are now closed.

AGENDA

Tuesday 17th March 2026 (HTSLCN)

Time*	Topic	Speaker
08:30 – 09:00	Registration of participants and coffee	
09:00 – 09:05	Opening note	
09:10 – 09:30	Utilizing high temperature furnace off-gases in biomass gasification: A pathway for efficient CO ₂ utilization	Shareq Mohd Nazir
09:30 – 09:50	Sorption-enhanced reverse water gas shift (COMAX)	Galina Skorikova

09:50 – 10:10	Chemical looping for CO ₂ purification	Dora Andreea Chisăliță
10:10 – 10:40	Coffee break	
10:40 – 11:00	Novel Direct Air Capture System using Calcium Looping	Carlos Abanades
11:00 – 11:20	Chemical looping CO ₂ splitting over Mn-based perovskites and high-entropy perovskites enabled by industrial waste-gas utilisation	Adam Zaidi
11:20 – 11:40	Sorption-enhanced gasification of residual biomass for high-purity hydrogen production with integrated CO ₂ capture	Luis La Calle Canelada
11:40 – 12:00	Pilot demonstration of Integrated CFB Calcium Looping in Cement Plants	Felix Mangold
12:00 – 13:00	Lunch	
13:00 – 13:20	SEWGS technology de-risking	Eric van Dijk
13:20 – 13:40	Scaling Chemical-Looping Combustion for Sustainable Waste-to-Energy Applications beyond 1 MW _{th}	Jochen Ströhle
13:40 – 14:00	Fate of HCl in Calcium Looping Systems: Operational Insights from the 1.7 MW _{th} La Pereda CFB Pilot Plant	Borja Arias
14:00 – 14:20	NO _x Transformation and Reduction Kinetics in Calcium Looping Systems	Richard T. J. Porter
14:20 – 14:40	Environmental performance of synthetic CO ₂ sorbents for carbonate looping: an ex-ante LCA coupled with process modelling	Agnese Pedretti
14:40 – 15:00	Steady-state and transient modelling of calcium looping integrated with steelmaking processes	Markus Secomandi
15:00 – 15:30	Coffee break	
15:30 – 15:50	Integration of Calcium Looping and Solid Oxide Electrolysis for e-methanol production in steelmaking	Nestor D. Montiel-Bohórquez
15:50 – 16:10	Modeling and model development in novel solid looping projects	Markku Nikku
16:10 – 16:25	Evolution of the CO ₂ carrying capacity of limestone in CaL systems when exposed to HCl and SO ₂ containing gases	Sergio Celiméndiz
16:25 – 16:45	Design of a Mobile Carbonate Looping Pilot Plant for On-Site CO ₂ Capture from the Flue Gases of Various Industrial Plants	Jochen Ströhle
16:45 – 17:05	CO ₂ and SO ₂ capture in the copper production	Sergio Celiméndiz

	process	
17:05 – 17:25	Calcium Looping based on CFB as a CO ₂ Capture Technology for Modern Steelmaking - Engineering and Design of the TRL 6 Pilot Plant	Martin Haaf
17:25 – 18:30	Panel discussion and closing remarks	Carlos Abanades, Jochen Ströhle, Martin Haaf, Paul Cobden
19:00 – 21:30	Bus pick-up for dinner	

Wednesday 18th March 2026 (CaLby2030)

Time*	Topic	Speaker
08:30 – 09:00	Registration of participants and coffee	
09:00 - 09:10	Welcome words from the host and the coordinator	SWERIM & CSIC
09:10 - 09:30	Decarbonization pathways in iron & steel: an industrial perspective	TBC
09:30 – 09:50	Conceptual Design for First of a Kind (FOAK) Industrial Demonstration Projects	Martin Haaf (SUMITOMO SHI FW)
09:50 – 10:10	Pilot demonstration of CFB-CaL integrated in Steel industries	Malin Blomqvist (SWERIM)
10:10 – 10:25	Carbon Transport & Storage: Optimisation tools for Multimodal Transport	Richard T. J. Porter (UCL)
10:25 – 10:45	Coffee break	
10:45 – 11:00	Dynamic modelling capabilities of CFB-CaL systems	Markus Secomandi (LUT)
11:00 – 11:30	EMPHATICAL project presentation	Galina Skorikova (TNO)
11:30 – 12:00	INITIATE project presentation	H.A.J. (Eric) van Dijk (TNO)
12:00 – 13:00	Lunch	
13:00 – 14:00	Bus to Swerim + distribution of PPE	ALL
14:00 – 16:30	Visit to Swerim's pilot	ALL
17:00	Bus drop-off at the airport and return to venue	

*Timings are expressed in CET – Central European Time

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Project name: CaLby2030 | Grant Number: 101075416.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

The project is also supported by the UK Research and Innovation (UKRI).

VENUE

Name: Kulturens Hus

Address: Skeppsbrogatan 17, Luleå, Sweden



Kulturens hus is in downtown Luleå, just minutes from shops, entertainment, restaurants and accommodation. This modern cultural centre, located on Luleå's northern harbour front, commands a beautiful view and is ideally equipped for conferencing. The complex houses the city library, an art gallery, large and small concert halls, multifunctional foyers on three levels, conference facilities, a café and a restaurant. For visitors, Luleå's Tourism Office is conveniently located in Kulturens hus. Further information about the conference venue is available at www.kulturenshus.com.

You can find more information about Luleå, including the weather forecast through the following link: [Welcome to Luleå!](#). Please keep an eye on the weather forecast and please make sure to bring weather-appropriate clothes.

DIRECTIONS TO THE MEETING/VENUE

Upon arrival at Luleå Airport, please take a taxi to your hotel. Taxis are found outside the airport. Please make your taxi booking in advance if possible. The trip from the airport to the hotels or the conference venue takes about 10 minutes. The Clarion Hotel Sense is very close to the venue, just opposite the street.

CONFERENCE DINNER

Dinner will be held at 19.30 on Tuesday March 17th, more information to follow.

SITE VISIT

On March 18th, after CaLby2030 project 2nd Dissemination event we will organize a site visit to Swerim's brand new TRL6 pilot for metallurgical CaL-CFB, located at Aronstorpsvägen 1, 97437 Luleå, Sweden. Buses will be available from the venue to the site and from the site to the venue/ airport.

Please wear appropriate clothing for the site visit, including no open-toed shoes and no high heels. Please note that delegates are **not permitted** to take photographs or videos at the site.

HOTEL ACCOMMODATION

We recommend booking your accommodation as soon as possible due to limited availability in Luleå during the meeting dates.

Below is a map showing the location of the venue and hotels:

1. Kulturens hus
2. Clarion Hotel Sense <http://www.clarionsense.se/>
3. Best Western Plus Savoy [Best Western Plus Savoy Luleå | Best Western Luleå | Hotels in Luleå](#)
4. Elite Stadshotellet <https://www.elite.se/sv/hotell/lulea/stadshotellet/>
5. Quality Hotel Luleå <https://qualitylulea.se-hotel.com/en/>
6. Hotell Amber & Naran [SPiS Hotell Amber](#)
7. Park Hotell Luleå [Park Hotell Luleå | Luleås billigaste hotell](#)
8. Luleå Bed and Breakfast [Luleå Bed & Breakfast](#)
9. Comfort Hotel Arctic [Comfort Hotel™ Arctic | Luleå | Strawberry](#)
10. Hotell Scandic Luleå is 2 bus stops away (or a 28 minute walk) from the conference venue, with buses every 15 minutes [Bo på Scandic Luleå | Hotell i Luleå](#)



SCIENTIFIC COMMITTEE

The Scientific Committee of the HTSLCN organises and manages the technical sessions of the meeting:

- Anders Lyngfelt, Chalmers University, Sweden
- Ben Anthony, Cranfield University, UK
- Bernd Epple, TU Darmstadt, Germany
- Carlos Abanades, CSIC-INCAR, Spain
- Dennis Lu, Natural Resources Canada, Canada
- Jasmin Kemper, IEAGHG, UK
- Matteo Romano, Politecnico Di Milano, Italy
- Paul Cobden, Swerim, Sweden
- Peter Clough, ERM, UK
- Stuart Scott, University of Cambridge, UK
- Tobias Pröll, University of Natural Resources Vienna, Austria
- Vincenzo Spallina, University of Manchester, UK
- Zhenshan Li, Tsinghua University, China

ABOUT IEAGHG

The IEA Greenhouse Gas R&D Programme (IEAGHG) is an international collaborative research programme established in 1991 as an Implementing Agreement under the International Energy Agency (IEA).

IEAGHG studies and evaluates technologies that can reduce greenhouse gas emissions derived from the use of fossil fuels. The Programme aims to provide its members with definitive information on the role that technology can take in reducing greenhouse gas emissions.

IEAGHG takes pride in being an informed but unbiased source of technical information on greenhouse gas mitigation.

The programme's main activities are:

- To evaluate technologies aimed at reducing greenhouse gas emissions.
- To help facilitate the implementation of potential mitigation options.
- To disseminate the data and results from evaluation studies.
- To help facilitate international collaborative research, development and demonstration activities (R,D&D).



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