



DeCarbCH Newsletter

December 2024

Dear DeCarbCH Partners,

We would like to thank you for the exciting projects, the strong partnerships and the joint success in 2024.

Here is the latest news from SWEET DeCarbCH covering the following topics:

- [Heat Pumps](#)
- [Solar Energy / Heat Storage](#)
- [Peak Load Coverage](#)
- [Socio-Economics](#)
- [Lunch Talks](#)
- [Deliverables and Highlights](#)
- [Recent Publications](#)

If you missed a Lunch Talk, you can still watch it on our [YouTube channel](#) and follow us on [LinkedIn](#) and [Twitter](#).

For 2025, we are already looking forward to your participation in the [Upcoming Events](#):

- 24 Jan 2025, 12th Swiss Symposium Thermal Energy Storage, Lucerne
- 12/13 Feb 2025, International Symposium on Renewable Metal Fuels (ReMeF), Rapperswil
- 26 Aug 2025, 4th SWEET Conference, Bern

Please feel free to contact us at info@sweet-decarb.ch if you have any questions.

We wish you a peaceful holiday and a good start to the New Year!

Best wishes,

[The DeCarbCH Management Team](#)



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Upcoming Events

HSLU Hochschule
Luzern



**Symposium
ReMeF 2025**

12-13 February 25,
OST Campus
Rapperswil



24 January 2025, Lucerne
12th Swiss Symposium Thermal Energy Storage

The symposium organized by HSLU will focus on Seasonal Thermal Energy Storage (STES) driving decarbonization across Switzerland and Europe. Stakeholders from academia, industry and utility will dive into the latest challenges and innovations. Registration is still open.

[read more](#)

12/13 February 2025,
Rapperswil
International Symposium on Renewable Metal Fuels (ReMeF)

OST SPF is organizing the first ReMeF Symposium 2025. Distinguished scientists and experts will share their ground-breaking insights regarding renewable metal fuels. Registration is still open.

[read more](#)

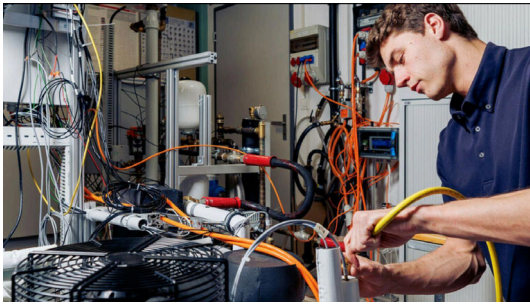


26 August 2025, Bern, 4th SWEET Conference


The 4th SWEET Conference offers a platform for exchange between research and implementation. It is therefore aimed at researchers from current and future SWEET consortia, experts from energy research and representatives from the private sector, associations, cantons, cities, municipalities and the federal government.

[read more](#)

Heat Pumps




Webinar on Integration of High-Temperature Heat Pumps in Swiss Industrial Processes (HTHP-CH)

 November 07, 2024 • 8:30 AM - 11:30 AM
 Online event

**March/April 2025 (German),
 September 2025 (English),
 Buchs
 Continuing Education Course
 «Industrial heat pumps» at
 OST IES**

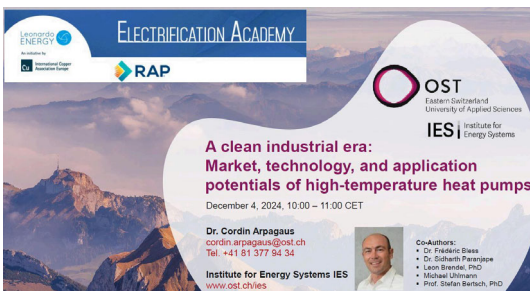
The 4-day training course facilitates direct interaction with experts. Participants will gain experience with high-temperature heat pumps for industrial applications. The March/April 2025 course will be in German and in September 2025 in English. Online participation is possible on Day 1 and Day 2.

[read more](#)

**7 November 2024, Online
 Webinar on the Integration of
 High-Temperature Heat Pumps
 in Swiss Industrial Processes
 (HTHP-CH)**

The webinar attracted more than 330 participants from 26 countries, mainly researchers, sales engineers, process engineers, product managers, project leaders, and decision-makers such as CTOs and CEOs. The video recordings are now available on the [DeCarbCH YouTube channel](#), and the PDF presentation slides for download.

[read more](#)



**4 December 2024, Online
 Webinar on High-Temperature
 Heat Pumps**

Cordin Arpagaus from OST IES provided a market overview of high-temperature heat pump suppliers, insight into limitations, the



**30 July 2024
 Heat pumps show their muscle**

Of the 43,000 heat pumps sold in Switzerland in 2023, almost 90%

current state of technology, and potential applications for steam generation. The webinar organized by Leonardo Energy was recorded and is available on [YouTube](#). The PDF presentation slides are available for [download](#), including Q&A discussion points.

[read more](#)

have a capacity of less than 20 kW, typically required for detached or semi-detached houses. In addition, heat pumps are used to supply apartment buildings with heat and industrial plants with process heat. This was made clear at the annual heat pump conference of the Swiss Federal Office of Energy in Bern at the end of June 2024. Read the article [here](#).

[read more](#)

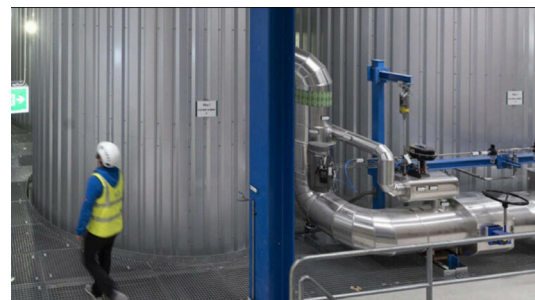
Solar Energy / Heat Storage



14 December 2024 **Factsheets on the integration of solar energy in district heating**

7 factsheets on the Integration of Solar Energy in District Heating were established:

- Flat Plate Collectors
- Evacuated Tube Solar Collectors
- Parabolic Trough Collectors
- Vacuum Flat Plate Solar Collector
- Photovoltaic Thermal Collector
- Cost and Economics
- Grid integration of solar heat



15 July 2024 **Factsheets on available large heat storage technologies for district heating**

In collaboration with Solites, 8 factsheets on available storage technologies for thermal networks were established in the BigStoreDH project (09/2021 to 12/2023, SFOE funded).

- Aquifer thermal energy store
- Pit thermal energy store
- orehole thermal energy store
- Buried concrete tank
- Cost-effectiveness

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- Steel tank unpressurized
- Steel tank pressurized
- System integration

[read more](#)

Peak Load Coverage

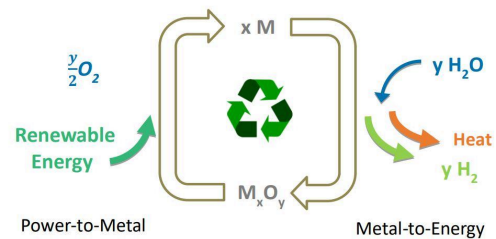


1 November 2024

ReWAX – Smaller heat pump dimensioning by X-to-Energy for peak load coverage

The project ReWAX analyses which energy carrier X produced based on renewable electricity (Power-to-X) is suitable to replace fossil-fueled peak load coverage in the future, both for large residential and district heating.

[read more](#)



15 December 2024

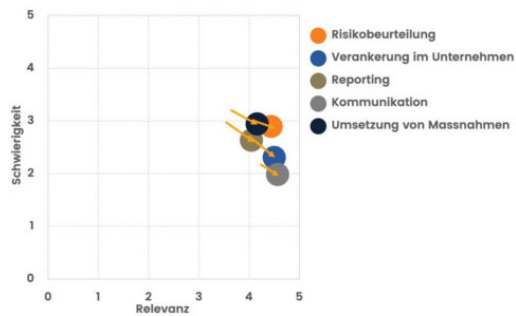
PeakMetal – Covering winter peaks of heat and electricity demand by «renewable metal fuels»

The PeakMetal project investigated which metals are suitable as Renewable Metal Fuels and how much they could contribute to filling the winter energy gap of Switzerland in 2050, when domestic electricity production will be covered mainly by hydro and solar resources.

Have a look at the project website, an article on behalf of the SFOE, and a Podcast that talks about the results.

[read more](#)

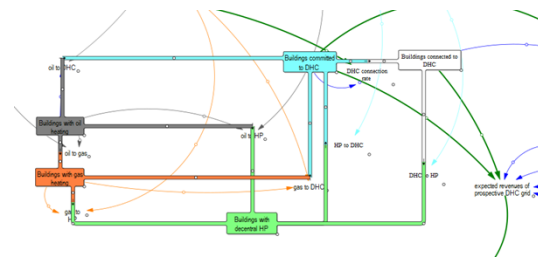
Socio-Economics



26 December 2024 Survey on challenges of integrating business sustainability: Results

ZHAW thanks the 125 firms that participated in a survey on the challenges of integrating business sustainability. The research shows that a strategic orientation towards sustainability is a key factor that leads firms to adopt the low-carbon technologies at the heart of SWEET-DeCarbCH. See the key findings and project report.

[read more](#)



26 December 2024 Modeling framework SCOVILLE developed by ZHAW

A quantitative, dynamic model named SCOVILLE (Strategy Cockpits for Orchestrated Implementation of Thermal Grids in Cities and Municipalities) has been developed by ZHAW. The model simulates how KPIs (i.e., annual cash flow, market share of thermal grids and speed of heating system decarbonization) respond to decision-making by building owners, public policy interventions and the utility's pricing and financing strategies. The SCOVILLE modeling framework is versatile and can be easily parameterized to local settings and adapted to new research questions.

[read more](#)

Lunch Talks



3 December 2024
The Hard Costs of Buildings' Decarbonization by Christian Painchaud

Presentation given by Christian Painchaud (Audette)

This talk is about energy modeling and discusses how commercial real estate asset managers make impactful decarbonization plans and deploy capital effectively to meet their targets.

[read more](#)

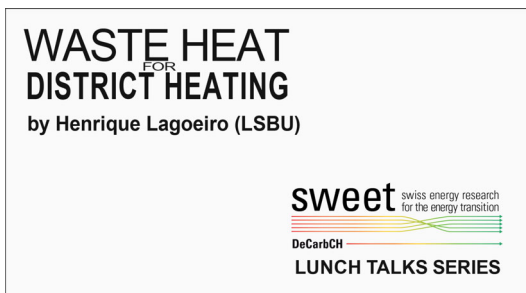


5 November 2024
Hydropower creates insulating power

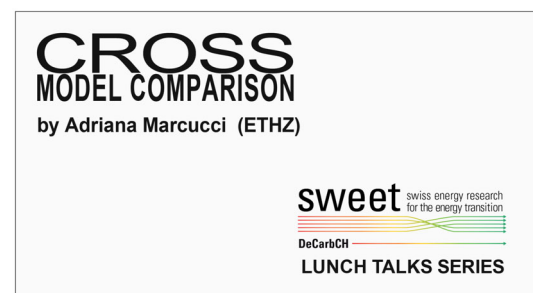
Presentation given by Pieder Cadruvi (Flumroc)

This talk shows how Flumroc AG has modernized its production facilities for stone wool used in thermal insulation, acoustic insulation, fire protection, and technical applications. The old cupola furnaces have been replaced by an electric melting furnace that runs on electricity from Swiss hydropower. Flumroc is thus reducing its CO₂ emissions and significantly improves its ecological footprint.

[read more](#)



1 October 2024
Evaluation of waste heat as a low carbon resource for district heating: learnings



3 September 2024
CROSS Model Comparison

Presentation given by Adriana

from a UK-wide study

[Presentation given by Henrique Lagoeiro \(LSBU\)](#)

This talk summarises the findings from research carried out on waste heat opportunities in the UK by the Heating and Cooling Research Group at London South Bank University, which has been investigating the potential of unconventional heat sources in the UK through extensive data collection, GIS mapping, techno-economic modeling, feasibility case studies and real-life demonstrations.

[read more](#)

[Marcucci Bustos \(Energy Science Center, ETH Zurich\)](#)

This talk is about the results from the CROSS model comparison, including the supply and demand of electricity, residential heating, industrial heat, and transport. This comparison offers valuable insights into the most effective strategies and identifies areas requiring further investigation.

[read more](#)



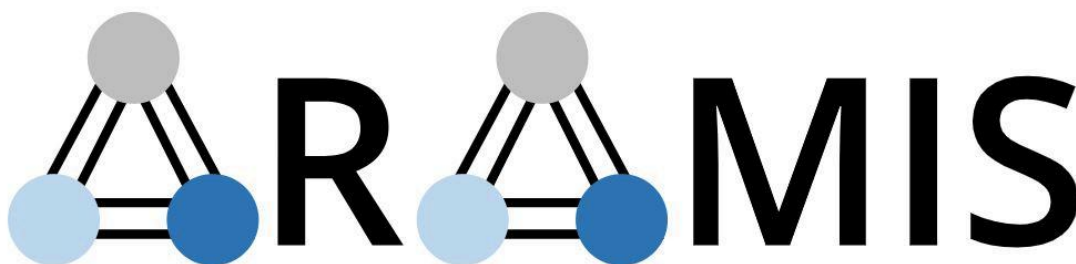
Watch our previous Lunch Talks on our YouTube Channel

1. [Pinch Analysis](#)
2. [Socio-Economic Challenges](#)
3. [Industrial Heat Pumps](#)
4. [Thermal Networks](#)
5. [Long-term Thermal Energy Storages](#)

6. [Temperature Reduction in District Heating](#)
7. [Solar Energy for Networks / Industry](#)
8. [Perspectives on Thermal Grid Modelling under Uncertainty](#)
9. [Negative Emission Technologies](#)
10. [Case Study – Decarb City of Zurich](#)
11. [Renewable Heat: Is it rocket science?](#)
12. [Deep geothermal energy to decarbonize the Swiss energy system](#)
13. [Bubble in the lake, big thermal storage underwater?](#)
14. [Decarbonisation of heat supply of Vienna's district heating system](#)
15. [Beyond the Numbers: Why Energy Scenarios Often Fail to Connect with Decision-Makers](#)
16. [RESHeat - system for heating, cooling and domestic hot water production for residential buildings](#)
17. [Decarbonising New Zealand Industry through Process Integration and Renewable Energy Integration](#)
18. [Current legal issues relating to district heating](#)
19. [Revolutionary energy storage cycle with carbon-free aluminium](#)
20. [Highly efficient high-temperature heat pumps with temperature glide](#)
21. [Industry decarbonization through electrification, potential and impacts in CH](#)
22. [From gas supplier to renewable energy supplier](#)
23. [Waste heat as a resource for district heating](#)
24. [Hydropower creates insulating power](#)

are available on [YouTube](#) and the presentation slides on our [DeCarbCH Website](#).

Deliverables and Highlights



DeCarbCH Deliverables and Highlight Reports are now available on the [ARAMIS](#) data platform

Recent Publications



See our Publications List

All the News on the Website

Any question can be sent to info@sweet-decarb.ch



DeCarbCH has received funding from the SFOE in their SWEET programme.

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