

NEWSLETTER HYPERGRYD

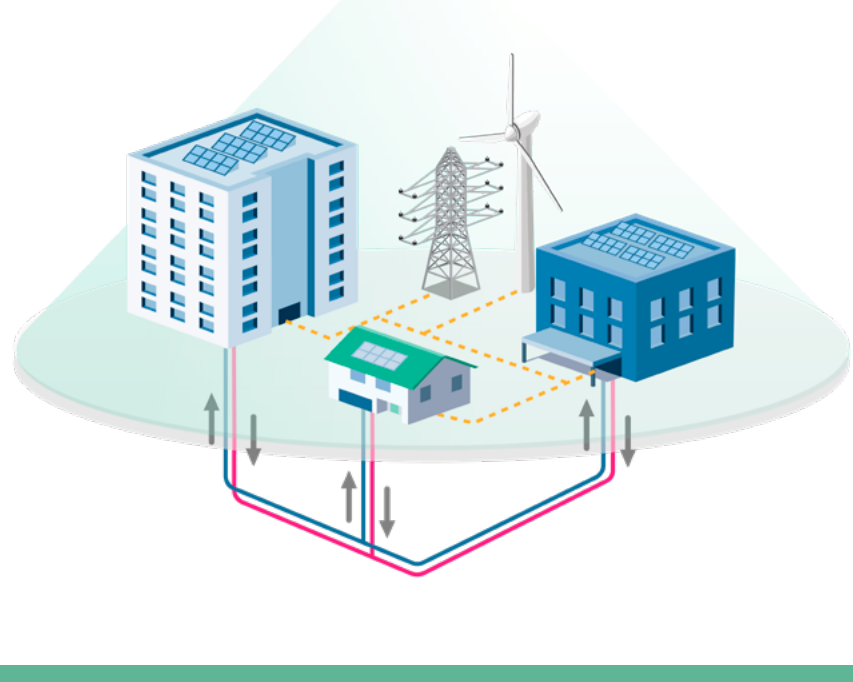
Hybrid Coupled Networks for Thermal-Electric Integrated Smart Energy Districts

HYPERGRYD, the Horizon 2020 project is moving forward!!

With the participation of 19 partners from 7 European countries, HYPERGRYD is developing a set of cost-effective, replicable, and scalable technical solutions that will enable the integration of renewable energies with different dispatchability and intrinsic variability within thermal grids and their connection to electricity grids.

In its two-and-a-half years of life, the project is progressing in developing innovative and integrated technological innovations, ICT tools, and services covering all levels of the process, from the building to the Local Energy Community (LEC).

HYPERGRYD aims to accelerate the sustainable transformation, planning, and modernisation of district heating and cooling (DHC) for the 4th and 5th generations. It also works on the real-time management of electrical and thermal energy flows in complex coupled energy networks and the synergies between them.



Hypergryd continues to make progress!

Time flies. We're halfway through 2023!

During this period, modelling and simulation of the enabling technologies have been carried out to define the specifications of the prototypes for manufacturing. The devices combined with the HYPERGRYD enabling technologies already present in KEZO LiL have been simulated. Tests are being carried out on the components of the cogeneration unit. Tests with the electric model have already been carried out at ENVI LiL. And the current demonstration situation in the Live-in Labs has been analysed holistically to define the HYPERGRYD implementation strategy in each case. The use cases, demonstration strategy, and validation criteria for LiLs have been described.

About exploitation, the Exploitable Results (ER) have been updated, and relevant technological and market trends related to the topics addressed by the HYPERGRYD project continue to be studied.

Let's contribute to the transition towards future 4th and 5th generations of District Heating & Cooling networks!



NEWS

EUROTHERM CONFERENCE, INNOVATIVE SOLUTIONS FOR THERMAL ENERGY STORAGE DEPLOYMENT



In recent times, thermal energy storage has become an essential solution for the cost-effective exploitation of energy resources in local energy communities and for decarbonizing building heating and cooling systems. We at HYPERGRYD are delighted to have been part of Eurotherm Conference, dedicated to advancing the field of thermal energy storage and held recently at the University of Lleida from 24-26 May 2023, Spain.

[▶ LEARN MORE](#)

HYPERGRYD 4th GENERAL ASSEMBLY IN STOCKHOLM



The HYPERGRYD 4th General Assembly was held at Stockholm, Sweden. KTH hosted us. Now that we finalized the strategic framework for integrating energy systems in DHC, all the tasks related to the technologies for smart hybrid grids are ongoing and active.

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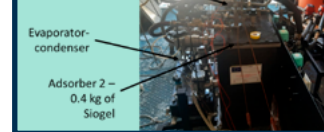
LIVE IN LABS USE CASES DESCRIPTION



This article explains what is meant by a use case in a Live in Lab, the peculiarities of each Live in Labs within HYPERGRYD, and the applications and expected results of each use case.

[▶ LEARN MORE](#)

HOW THERMOCHEMICAL STORAGE CAN CHANGE THE IDEA OF STORAGE



When thinking about thermal storage, the first thought of everyone is about water storage, which is cheap, widely available, and used for several years, making it reliable. But is it so, or are there other alternatives worth considering?

[▶ LEARN MORE](#)

PUBLICATIONS & RESULTS

Battery Energy Management System Using Edge-Driven Fuzzy Logic

This article addresses and validates a fuzzy logic-based EMS for the optimal management of photovoltaic (PV) systems with lead-acid ESSs using an edge computing technology. The proposed method is tested on a real smart grid prototype in comparison with a classical rule-based EMS for different weather conditions.

[▶ LEARN MORE](#)

Improved Adaptive Neuro-Fuzzy Inference Model for Photovoltaic Power Forecast

This article explains the importance of photovoltaic power forecasting for improved performance and management of photovoltaic/battery hybrid systems. Data-driven models have become very efficient for building regression models for PV power forecasting.

[▶ LEARN MORE](#)

GLOSSARY

Have you seen our wiki-style glossary? A terms and definitions glossary has been created to facilitate partners and stakeholders to understand and have a consensus on the concepts used in the project.

It is a reference tool for anyone interested to know more about Hypergryd.

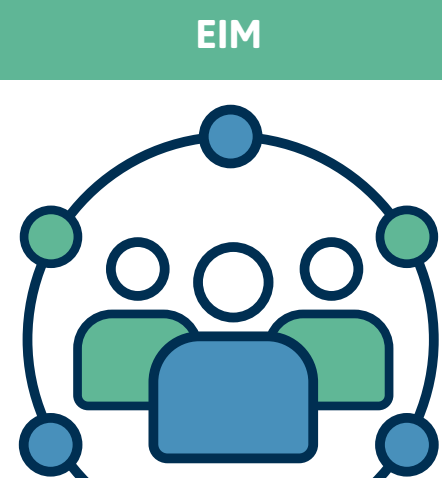
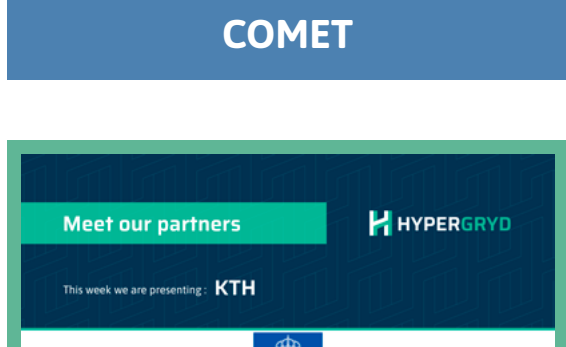
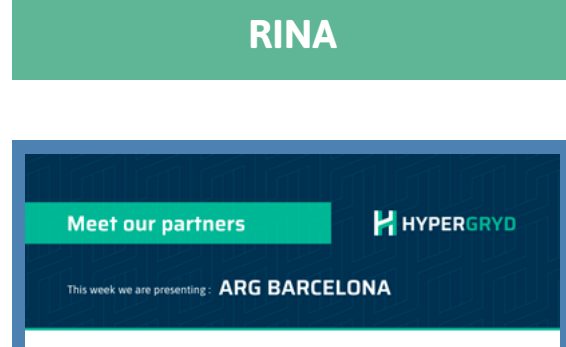
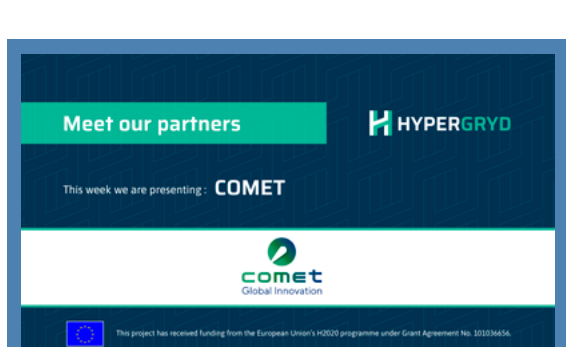
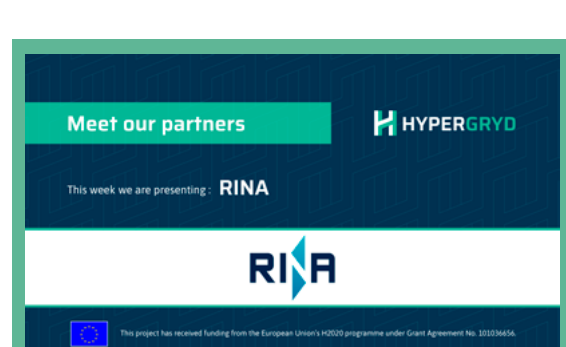
[GLOSSARY](#)



MEET OUR PARTNERS!

If you are new to our project, this is the place to start! Check out this section with short interviews with HYPERGRYD partners.

Have a look at the new interviews:



HYPERGRYD SOLUTIONS

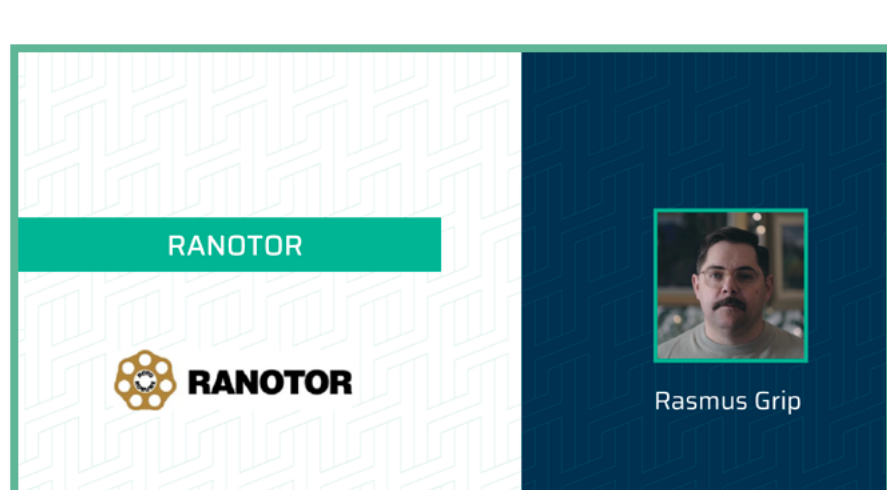
We are pleased to introduce the new section, **HYPERGRYD SOLUTIONS**. Now that we know the partners... We asked them to tell us about their work, benefits, and challenges at HYPERGRYD.

We start with:



Gabriele Penello

[▶ WATCH THE VIDEO](#)



Rasmus Grip

[▶ WATCH THE VIDEO](#)

Very enlightening!
More interviews coming soon!

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<https://hypergryd.eu/>



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