



Editorial

Only one month left before the COP26 in Glasgow, where states, but also city representatives, NGOs and engaged citizens will gather to discuss our commitments to reach carbon neutrality by 2050. Cities will of course be on the front-line, and the way we heat and cool our buildings is an important leverage to consider in order to decarbonize our urban environment.

The D2Grids project team will be present for this international gathering to spread the word on 5th generation district heating and cooling, with a dedicated conference, followed by a serious game for decision makers. We invite you to join those events in Glasgow or online!

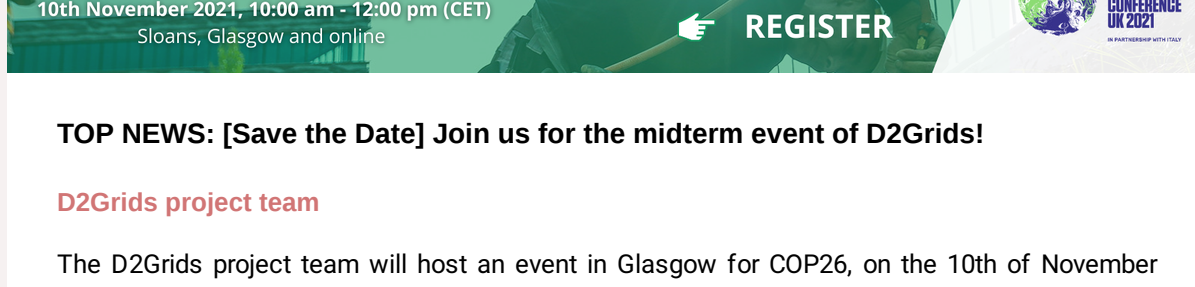
The objective of these gatherings? Inspiring other cities, in Europe and above, to implement low-temperature, circular thermal loops to heat and cool their buildings.

In this newsletter you will find news from Bochum, where drillings have started for our German pilot, key outcomes of our partners' sprint session to find the accurate KPIs on 5GDHC, and a new report on investment opportunities in the DHC sector!

Enjoy your reading,

D2Grids project team

D2GRIDS NEWS



TOP NEWS: [Save the Date] Join us for the midterm event of D2Grids!

D2Grids project team

The D2Grids project team will host an event in Glasgow for COP26, on the 10th of November 2021. The conference "District Heating and Cooling: on the road to 5th generation" will showcase the first results in developing the concept and progress achieved on the pilot sites.

The event will also be an occasion to share perspectives to roll-out 5GDHC grids across European cities. A workshop for decision-makers interested in deploying a 5GDHC grid will be organised on the same day. The conference and the serious game will both be also accessible online!

Join us!



Drillings on the Bochum D2GRIDS pilot site

Bochum

After months of preparation, the first drillings have started this October in Bochum!

With the planned use of the geothermal energy source, we are creating the basis for a high ecological standard on the site" - Dietmar Spohn, CEO of Stadtwerke Bochum.

This article details the progress that has been made on this 5GDHC pilot site, and the importance of the current drillings.

Read more



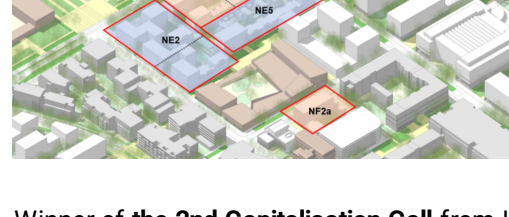
Defining 5GDHC: partners on the road to get shared KPIs.

Stromversnellung & EnergyVille / VITO

The first objective of the D2GRIDS project was to clearly put forward a definition of what a 5GDHC grid is, which resulted in five core principles. Beyond these principles, a set of Key Performance Indicators (KPI's) are required derived from the reasoning and goals for each of the principles.

Finding the right KPIs was the aim of the 'sprint session' organised in Genk.

Read more



Case study: solar energy to feed a 5GDHC grid: how does it work?

GreenFlex

Winner of the 2nd Capitalisation Call from Interreg NWE, the D2GRIDS project will now study on better integration of electrical uses and local renewable electricity production capacities, to improve the decarbonisation of 5GDHC networks.

As a pilot site, the 5GDHC grid of Paris-Saclay (France) will be fed by a renewable source of electricity. Indeed, it will soon be connected to the production of photovoltaic electricity from the future building roofs of the housing company SEQENS (181 social housing units and a medical centre). Find out more about the challenges and the implementation of this ambitious project.

Read the article

Expert insights



[Report] Investment opportunities in the DHC sector

ASPER

Funding a 5GDHC project can be seen as complex and risky. Nevertheless, even if these projects generally share many similarities with conventional energy infrastructure, they can attract more specialised or non-conventional types of investors because of its sustainability, innovative aspect, and the increased interdependency between local stakeholders.

This report will help you to target the best financial investors to fund your project depending on their own profile and your project characteristics.

Read the report



Interseasonal heat storage in 5GDHC: testing the resistance of microorganisms to temperature variations

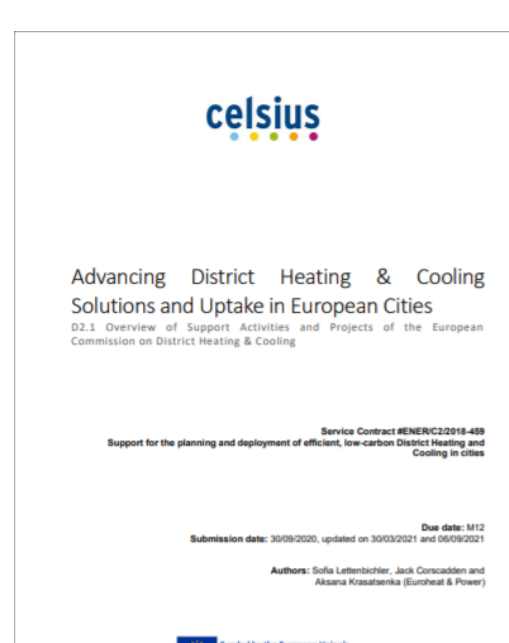
BRGM

In France, the D2Grids pilot site in Paris-Saclay has documented a new and innovative solution to store heat through the Albien aquifer.

Inter-seasonal storage could be a viable solution to store heat and avoid its release into the atmosphere. The BRGM is currently studying the impact of temperature variations on the aquifer's geochemistry and the microorganisms evolving in the water in order to assess the viability of the process.

Read the article

District heating and cooling in Europe



[Report] Advancing District Heating & Cooling Solutions and Uptake in European Cities

Celsius Initiative

Low-temperature district heating and cooling is key to decarbonising European cities. In order to be rolled-out across Europe, it needs to be an alternative that can easily be implemented everywhere.

That's why the Celsius Initiative focused, in this report, on the replication of district heating and cooling solutions.

Dated on a scale of 1 to 5 stars, it presents different projects, according to their replication possibilities in European cities, and details their advantages and technical uniqueness.

Read the report

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Online resources on district heating



[Webinar Replay] Celsius Webinar

Celsius Initiative

Watch the replay of this webinar on 5th generation DHC, hosted by the Celsius Initiative!

D2Grids partner Herman Eijdens (Mijnwater Energy B.V.) was present to share his insight on defining the technology concept of 5GDHC and its KPIs. Uffe Schleihs (Høje-Taastrup Kommune), representing COOL DH and Olaia Eguarte (TECNALIA), representing RELATED shared the outcomes of their project pilot sites, and discussed about the 5GDHC definition.

Watch the webinar

Agenda



[25th october - 29th october 2021]

EU Sustainable Energy Week. "Toward 2030 : reshaping the european energy system"

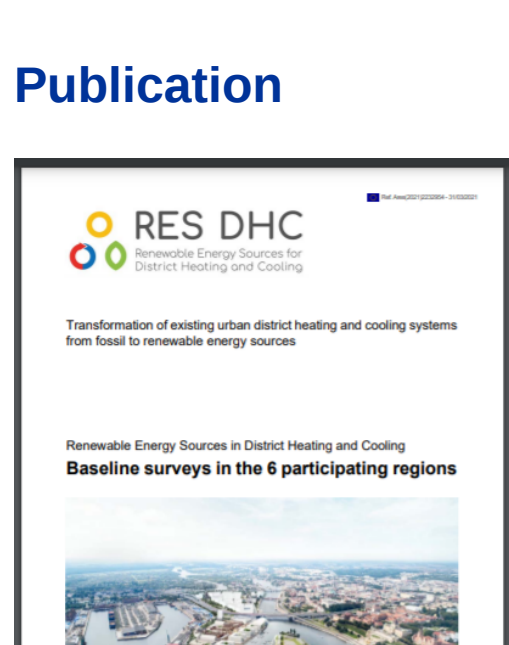
- Planned agenda of the week

[10th November 2021]

D2GRIDS mid term event : "On the road to 5th Generation" in Glasgow and online!

- Conference from 10:00am to 12:00pm (CET)
- Decision-makers serious game from 2:00pm to 3:30pm (CET)
- Register here

Publication



[Report] Transformation of existing urban district heating and cooling systems from fossil to renewable energy sources

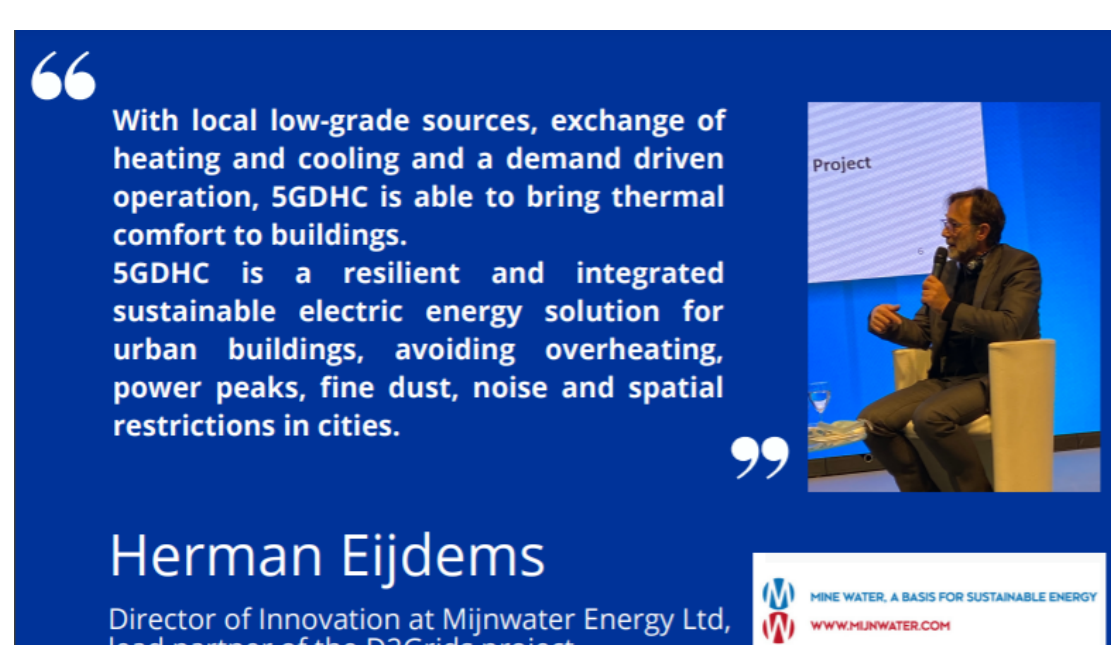
RES DHC

Published in April 2021, this guide offers a methodology to face all issues linked to the implementation of renewable energies in urban district heating and cooling systems (lack of knowledge / economical, legal, technical and organisational barriers).

Discover the solutions to succeed in decarbonizing the energy sector and make possible the dissemination of 5GDHC projects.

Read the report

Meet the partners



With local low-grade sources, exchange of heating and cooling and a demand driven operation, 5GDHC is able to bring thermal comfort to buildings. 5GDHC is a resilient and integrated sustainable electric energy solution for urban buildings, avoiding overheating, power peaks, fine dust, noise and spatial restrictions in cities.

Herman Eijdens

Director of Innovation at Mijnwater Energy Ltd, lead partner of the D2Grids project.

About D2Grids

The 5th generation district heat and cold grid (5GDHC) was first developed in Heerlen, Netherlands, by Mijnwater Energy Ltd. In contrast to traditional district heating, it is an intelligent thermal network based on a local low temperature loop. Decentralised energy production, using heat pumps located at the user's premises, allows energy exchange on the network, where flows are demand-driven. This concept allows the recovery of cold and heat emitted by supermarkets, data centers, factories, offices etc.

D2GRIDS stands for "demand-driven grids". It is an Interreg Northwest Europe (NWE) project that runs for more than 4 years (2018-2023). Mijnwater Ltd, based in the Netherlands, is coordinating the project with 15 other main partners and 6 secondary partners. Five pilot sites located in Paris-Saclay (France), Bochum (Germany), Brunssum (Netherlands), Glasgow and Nottingham (UK) will develop 5GDHC networks.

Know more about 5GDHC on our website!

Join the District Heating and Cooling online community

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