



Newsletter #12

March 2023



Know-it-all about 5GDHC grids!

Wednesday, 19th April 2023

Paris-Saclay

Conferences, round tables, debates, site visits.... and more!

EDITORIAL

With only a few months left before the project comes to an end, find the March newsletter dealing with recent key information and outputs.

We can now say that D2Grids project's main target has been met since its beginning: a standardised generic heating and cooling loop model has been defined, experimented and assessed. This model maximises the share of recycled and renewable energy.

Dear readers, now is the time for you to learn more about the know-how, knowledge, tools, and feedback developed by D2Grids project since its creation in 2018.

Join us on 19 April at the CentraleSupélec engineering school, on the Paris-Saclay campus in France, for a day dedicated to heating and cooling grids, where 5th generation district heating and cooling will be in the spotlights!

On the agenda of this newsletter:

- Save the date: know-it-all about 5GDHC and how these innovative grids will be key to decarbonise heating and cooling, on 19/04/23 in Paris, CentraleSupélec.
- Be inspired by our 5GDHC pioneers:
 - Martin McKay, Executive director of regeneration of Clyde Gateway, tells us more about the 5GDHC Glasgow pilot site.
The case-study presenting this project is accessible at the end of this newsletter!
 - Understand the new ambitions for Paris-Saclay 5GDHC grid with Veolia, which takes over its operation!
 - Watch 2 new videos about Glasgow and Plymouth 5GDHC projects: D2Grids pilot sites!
- Keep learning about 5GDHC concept with:
 - The 2nd training module focusing on technological aspects.
 - Key Performance Indicators developed by D2Grids project, to assess heating and cooling grids. These have been applied on Bochum's pilot site: a replicable process for other DHC projects!
- Finally, broaden your horizons thanks to:
 - Feasibility studies and potential overview for 5GDHC across Europe (East-Midland in Ireland, Flanders in Belgium, France, Luxembourg, Germany, Scotland)
 - First lessons from data analyses of 53 5GDHC grids in Germany
 - Experience feedbacks from on track 5GDHC dutch systems!

Enjoy your readings,

D2Grids Project Team

D2GRIDS NEWS



TOP NEWS: District heating and cooling grids event on April 19th!

D2Grids team

The D2Grids project, Construction21, Fedene, Ademe, FNCCR and Euroheat & Power, are glad to invite you to the **event dedicated to district heating and cooling grids!**

The event will be held on **Wednesday 19th of april 2023, from 9:00 am to 5:30 pm** at the CentraleSupélec engineering school on the Paris-Saclay campus in France.

The morning will be dedicated to **5GDHC grids** that D2Grids has been developing for almost 6 years. This **final conference of D2Grids project** will present you feedbacks from pilot sites, support tools and trainings accessible for everyone and highlight the results of DHC research works!

On the afternoon, two **round tables** on the integration of these district heating and cooling grids within the city of tomorrow, the **lessons learned** from the Construction21 dossier as well as a **face-to-face meeting** on the production of heat thanks to local and renewable energy. At the same time, **tours to the Paris-Saclay 5th generation heating and cooling grid** will be offered.

[Know more & register!](#)

NEWS FROM PARTNERS



Paris-Saclay district heating and cooling grid: Veolia takes over the operation!

Paris-Saclay

It's official! EPA Paris-Saclay has joined forces with Veolia to take over the operation of the Paris-Saclay 5GDHC grid.

EPA Paris-Saclay keeps overseeing the **project management and financing** of the grid, while Veolia provides its **technical and social skills** to guarantee the continuity of the service and the **expected level of performance**. This collaboration aims to meet ambitious goals like doubling the grid power until 2028.

[Read more!](#)



Solar PV panels to supply electricity of the Glasgow heating and cooling grids

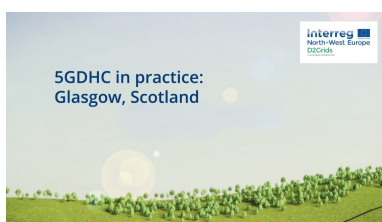
Clyde Gateway

Glasgow, a city on the road to **net-zero carbon!**

Scotland has set ambitious **carbon reduction targets**, and Martin McKay, Executive Director of Regeneration of Clyde Gateway, explains in this interview how Glasgow pilot site fulfills these objectives thanks to its innovative **5th generation heating and cooling grid!**

[Watch the Glasgow DHC project video just below]

[Read more](#)



5GDHC in practice: Glasgow, Scotland

Clyde Gateway

Find out the video presenting the 5GDHC grid of Glasgow!

Glasgow's 5GDHC grid aims to create an **ambient loop** on the Magenta Business Park site and **decentralise energy demand** for individual buildings.

This heating and cooling grid operates by **collecting and filtering wastewater** from the area and distributing it through **heat pumps**.

This water, which is then tempered, is distributed through **plastic pipework** on the Magenta site, along a defined path to the energy centre.

[Watch the video!](#)



5GDHC in practice: Plymouth, England

Plymouth City Council

Find out the video presenting the 5GDHC grid of Plymouth!

The D2Grids pilot site is using **local resources** in a smart and sustainable way. By utilising a **low temperature system** with **heat pumps** at the building level and connecting to **solar panels** on building roofs, the grid provides heating and cooling while increasing **self-sufficiency for electricity**. Additionally, a **geothermal well** has been constructed to benefit from Plymouth's coastal location, producing a large amount of water with the potential to heat hundreds of homes.

[Watch the video!](#)

5GDHC EXPLAINED

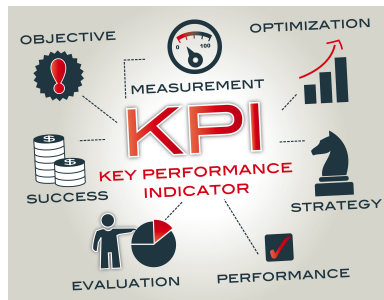


Second module about training for industries!

Open University

Open University presents the **2nd module of its online course**, which focuses on the technological aspects of 5GDHC. The course covers the main **components of 5GDHC**, with theoretical video lectures and **real-life examples** from the project's pilot sites. This module is ideal for people who want to **explore the technology** in more detail and find out more about this innovative, sustainable and exciting project.

[Read more](#)



5GDHC KPIs to assess DHC grids: a replicable process!

VITO

After the introduction to the process of the KPI's (key performance indicators) and how they are defined, you can now really understand **how DHC grids can be assessed**.

This assessment shows directly to what extent every **principle of 5GDHC** is implemented on a DHC grid. You'll find a **real life example with Bochum's assessment!**

[Read more](#)

DISTRICIT HEATING AND COOLING IN EUROPE

5GDHC Regional analyses of the D2Grids project are out!



5GDHC Regional analyses of the D2Grids project are out!

D2Grid project

5GDHC regional analyses of the D2Grids project are out and they aim to find the **potential of deploying 5GDHC** in 6 different regions after the project ends.

They consist of 5 categories: **renewable sources**, existing infrastructure and planned developments, **thermal demand and supply** profiles, legal and policy framework, and financing options.

[Read more](#)



Experiences with low-temperature district heating in the Netherlands

Stroomversnelling

Find out about the ambitions, considerations, and choices of five **Dutch project teams** working within the National Pilot Programme for Natural Gas-Free District Heating (PAW) to realise **low-temperature district heating**.

To what extent do they fit 5GDHC principles?

[Read more](#)



Survey of 53 fifth generation district heating and cooling grids (5GDHC) in Germany

D2Grids project

Discover the **survey** conducted among utility companies and engineering offices in Germany to **collect data on 53** fifth-generation district heating and cooling grids (5GDHC).

The analyses are based on **technical, economic, political key figures** and design **decisions**.

[Read more](#)

CASE STUDY



Case study of the 5th generation heating and cooling grid of Glasgow: Plymouth one is coming!

Clyde Gateway

Discover the case study to understand in detail the ins and outs of this **D2Grids pilot site** ! You can discover the general context of the project, the key figures, its **achievements** and **unique solutions**! It is also highlighting the **attractiveness** of the location of the grid, and the **self-sufficient approach** adopted by Clyde Gateway to supply in **heat and cold** the various consumers!

The case study of Plymouth pilot site will also be published soon!

[Read more](#)

AGENDA



[April 19th 2023]

[D2Grids closing event: District heating & cooling grids : key to energy transition](#)

[22 - 24 May 2023]

[Euroheat & Power congress: District Energy: The local solution to global challenges](#)

MEET THE PARTNERS

“

The key messages for us are about developing a network where we are lowering temperature and increasing efficiency. That's the kind of key message we want to be able to deliver. We also wanted people to deliver a message that it is about using local energy sources for local energy demand, and then strengthening the resilience of occupants.



”

Martin McKay

Executive director of regeneration



ABOUT D2GRIDS

The 5th generation district heat and cold grid (5GDHC) was first developed in Heerlen, Netherlands, by Mijwater 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 5 years (2018-2023). Mijwater Ltd, based in the Netherlands, is coordinating the project with **15 other main partners and 6 secondary partners**. **Five pilot sites** located in France, Germany, Netherlands and United Kingdom are developing 5GDHC networks.

More on D2Grids on: nweurope.eu/D2Grids

Visit the platform dedicated to 5GDHC: 5gdhc.eu

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