



Editorial

We are today at an important moment in the way we design our districts and cities. Optimising our energy consumption and developing new renewable energy sources has become a key challenge in Europe. One of the most promising solutions requires the decentralisation of our energy production. This is where the **D2Grids project** comes in.

The objective of the D2Grids project is to deploy **5th generation heating and cooling networks, known as 5GDHC**. This technology is already implemented on the **Mijnwater network in Heerlen**. The project partners will use this first experience to develop the concept and test new solutions at 5 pilot sites in France, Germany, Netherlands, and the UK. The 5GDHC network, in order to be deployed, requires the **adaptation of related technologies** to industrialise this system. It is also necessary to develop a **business model** and new forms of contractualisation, adapted to decentralised energy production.

Accelerating the deployment of 5th generation networks also means **raising awareness** and strengthening the knowledge of industry and decision-makers. To do this, D2Grids aims to create a **community of interest** through several communication tools: an [online community](#) has been created, and a platform dedicated to 5GDHC technology is also underway. To follow the project's news and learn about this new technology (reports, key events...), you may also follow the project on [Twitter](#) and [LinkedIn](#).

The D2Grids newsletter, will gather every three months articles written by the project partners, and will inform you on main project news and outputs!

Enjoy your reading.

INTERVIEW

Mijnwater: From flooded coal mine to circular district heating

Mijnwater B.V.



Mijnwater is the lead partner of the D2Grids project. Partners will adopt this approach on their district heating network to **roll out 5th generation district heating and cooling (5GDHC)** across North-West Europe.

This district heating network, located in Heerlen (NL) is perhaps one of the most innovative in Europe. Based on three principles - demand-driven, circular and able to store energy - the network supplies **both heat and cold to the connected customers**. The company provided heating, domestic hot water and cooling to 200,000 m² of building space in 2018, allowing CO₂ emissions from the connected buildings to be reduced by up to 65%.

Discover the Heerlen grid in this interview with **Herman Eijdemis, innovation manager for Mijnwater B.V.**

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News from the partners

Inauguration of the heating and cooling network of Paris-Saclay: the French demonstrator of D2Grids

EPA Paris-Saclay



On June 24th 2019, only a few days after its inauguration, partners of D2Grids met for a **visit of the Paris-Saclay energy network**.

Designated as a pilot site of the D2Grids project, **Paris-Saclay will encourage the development of 5GDHC**. Demonstrators of thermal systems and advanced demand management will be tested on the Paris-Saclay network to optimise its production and the energy consumption of buildings. An IOT (Internet of things) infrastructure will use artificial intelligence to learn about the energy behaviour of buildings and their users.

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5GDHC explained

Expert talk: From fossil to green heat

EnergyVille/Vito



Heating and cooling in our buildings and industry account for **half of the EU's energy consumption**. At the same time, the EU is setting ambitious targets to decarbonise the energy sector by 2030 and 2050. In this article, Nele Renders, Ann Wouters and Pieter Vingerhoets, from EnergyVille/VITO, discuss the challenges in detail and highlight a number of **tools and studies that can help with the transition** from fossil heat to green heat.

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How heat networks do yield more CO2 reduction

Stroomvernelling



In order to reach the climate goals in 2050, **almost seven million homes and one million buildings must increase their sustainability in the Netherlands**. The Planbureau voor de Leefomgeving (PBL) has substantially lowered these expectations by passing on the Climate Agreement draft. How can heat grids achieve more CO2 reduction? Stroomversnelling points out **four possibilities for using district heating to reduce carbon emissions**.

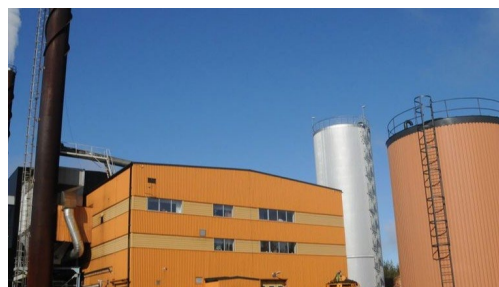
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Business

Decarbonising Europe: time to turn up the heat!

Asper Investment Management

Decarbonising the heat sector is imperative to meeting carbon emissions reduction objectives across Europe. However, progress so far has been sluggish in most European countries, with **difficulties to attract institutional investors**. However, there are encouraging signs that the **decarbonisation of heat is about to accelerate**, says Olivier Delpon de Vaux, from Asper Investment Management, a partner in the D2Grids project.



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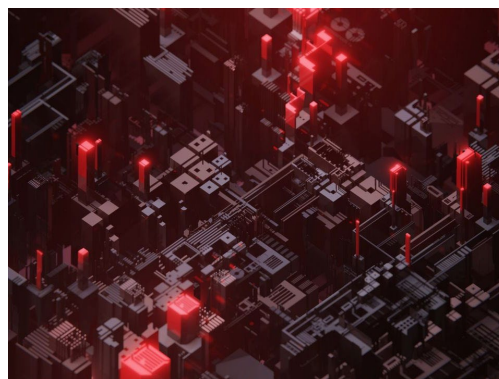
Technology

D2Grids: A challenge to integrate the new business model

Greenflex

5th generation district heating and cooling are showing up with the promise of new services. **Blockchain technology** seems to be an interesting solution to facilitate their implementation. Blockchain could help manage the decentralisation of actors and facilitate the implementation of new tariff models.

The **D2Grids project**, through the programmes planned in 5 pilots sites, will test the implementation of this blockchain technology !



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Events

The Municipality of Heerlen, host of the Energy Cities annual conference in April 2020

Energy Cities is a European partnership of more than 1000 municipalities. Each year, Energy Cities organises a **major conference in one of its member cities** to discuss the latest developments in local energy policies. It is an essential meeting to keep abreast of local authorities' initiatives, share new practices and coordinate policy work with European institutions. The conference will be a privileged meeting place for decision-makers and technicians from public bodies, the business world, research and civil society.

Heerlen is host city for the Energy Cities conference in 2020. Mijwater BV will play a

major role in this congress as partner in making the built environment more sustainable in Heerlen and the Parkstad-Limburg. They will also organise a **side event dedicated to D2Grids**.

Watch the video about the city of Heerlen!



About D2Grids

The project "demand-driven grids" (D2GRIDS), funded under Interreg North West Europe (NWE) programme, aims to develop 5th generation urban heating and cooling networks (5GDHC) in European cities.

The objective is to maximise the share of renewable energies in local energy loops, through an industrialisation of the approach, a standardised technological model, and a clarification of the business model to strengthen the interest of these projects for third party investors.

The project will last over 3 years (2018-2022). Mijwater Ltd. based in the Netherlands is lead partner. The project comprises 12 partners and 7 secondary partners. Five pilot sites located in Paris-Saclay (France), Bochum (Germany), Brunssum (Netherlands), Glasgow and Nottingham (United Kingdom) will develop 5GDHC networks.

Want to keep updated about the D2Grids project?

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