

# District Energy Vanguard's Newsletter

September 2020

## Editorial

As we burn down to the anticipated publication of the Government's *Heat & Buildings Strategy*, every trade association and industry lobby group is pressing the case that their technology holds the answer to the decarbonisation of the UK's heat sector. What is remarkable is that in the frantic effort to influence the Government there is nary a mention from each technology sector of how these might integrate to provide a realistic scenario. Heat networks in particular are completely ignored. I was once told by a senior figure from a power grid company that their modelling scenarios did not see a role for heat networks - at all!! Well, how strange given that the Government's Clean Growth Strategy (p152) indicates that approximately one in five of all buildings will be connected to heat networks by 2050?

In truth heat networks provide a hedge against the uncertainty that comes with the two main pathways – electrification and hydrogen.

Here's how.

### ***Challenges for decarbonisation pathways***

In the recent BEIS call for evidence on the future of CHP it noted that the point at which gas-fired CHP loses its carbon advantage because of the decarbonisation of the power grid is likely to come forward to the late 2020s. It is great news that the power grid is decarbonising so rapidly. We can all work on our laptops, watch TV and boil a kettle in the comfort that these activities are not exacerbating global warming as they once were. The assumption of many, particularly amongst property developers and green groups, is that it is a simple matter to similarly meet heat demand by installing electric heat pumps. However, to do so (remember that 80% of current heat demand is delivered by fossil gas) will, according to research (p9) for the National Infrastructure Commission, lead to an additional 45GW demand peak, at least, requiring an expansion of the current generating capacity by two thirds plus a £20bn investment in grid capacity over the next 30 years. Furthermore, the greatest investment of £200bn will be required at building level including the actual individual heat pump and an energy efficiency upgrade to facilitate optimal performance. To be fair there is scope for cost reductions going forward. But, nevertheless, this is going to take some time to deliver.

Additionally, as has been noted many times before and again recently (p11), heat demand is highly variable compared with relatively stable electricity demand. As such this will require substantial power grid flexibility capacity and storage to balance it, particularly to meet winter surges in heat demand.

Hydrogen, in contrast, can be buffered to cope with such surges. But this comes with challenges. At present fossil methane gas is pressured in the gas grid overnight to meet the morning peak. As larger volumes of hydrogen will be required to carry the same energy content as methane, a switch to it will need additional storage capacity to be built (p41) at key pinch points in the national gas grid. However, aside from the need to adjust or replace every gas-burning appliance in the country, the substantial cost of such a switch is upstream (p13) in creating the hydrogen. Either through splitting water molecules via electrolysis using excess wind and solar power to create 'green' hydrogen or stripping out the carbon from fossil methane via steam methane reformation (SMR) to create 'blue' hydrogen, dumping the recovered CO<sub>2</sub> via carbon capture & storage (CCS).

With an increased use of electric heat pumps, the upstream generation and distribution capacity will also need to be accounted for. Hydrogen generation and distribution is being trialled and, if successful, will then take many decades of development to replace our use of fossil methane. These are major infrastructure investments required over the next thirty years (p5). Consequently, commentators do not anticipate wide spread hydrogen availability, and that is uncertain (p9), until the early to mid-2030s. Which will leave only 15 – 17 years to undertake the building level stuff before the 2050 net zero deadline (in Scotland 2045 and in Wales 2055).

### ***How heat networks can help***

Heat networks, in contrast, can be built now and are identified by the Committee of Climate Change (CCC) as a no regrets option. Alongside higher standards for new build, energy efficiency retrofits in existing buildings, biomethane and heat pumps in off gas grid areas should happen whatever pathway is adopted. Scale matters as industrial sized heat pumps have double the Coefficient of Performance (CoP) of smaller models and large size thermal storage, common in Scandinavia and vastly cheaper than battery storage, can provide buffering for heat and a balancing asset for the power grid. Indeed research undertaken for the CCC by Imperial College found that integration of heat, gas and electricity vectors can *“improve the utilisation of low-carbon generation and reduce the overall requirement of production capacity and network infrastructure reinforcement”* (p17).

As such heat networks can facilitate the introduction of electrified heat or hydrogen or, as is most probable, a hybrid between the two. Establishing and extending heat networks in the next ten years will allow these fuels and/or technologies to be phased in during the 2030s and 2040s without the need to re-visit the building level requirements of both main pathways.

### ***Which technology for local areas?***

But what needs to be done to ensure this happens over the next ten years? Much is detailed in a new report on the opportunities for net zero localities from the University of Edinburgh. But to pick out a few key issues.

Heat networks are not a magic bullet and are most appropriate in areas of high heat density (P115). These are towns and cities but can also apply to densely packed villages and market towns. But deploying them in such areas reduces the absolute need for grid and generation upgrades (for both electrified heat and hydrogen) to serve other areas with constrained technological options. There may also be local circumstances that favour particular technologies.

Such locational selection implies some kind of heat zoning.

*“it may be appropriate and beneficial for the public sector – most likely through the local authority – to develop ‘heat zoning’ policy to incentivise and/or regulate the use of different heating and other energy technologies, where market failures persist or where substantial benefits can be gained through coordinated behaviour”.* (P10)

Left to the market it is likely that building owners, small and large, will make choices that will impact on the scale of overall investment required that will then re-bound upon them in higher charges.

*“Despite the higher system cost than the hydrogen heating option in most scenarios, electrification of heat through heat pumps and/or other electric heating is a proven technology and is the most likely outcome in the majority of homes in the absence of substantial heat infrastructure planning”.* (P9).

### **What will it cost?**

A further dimension is the cost of these major infrastructure investments. Research for the National Infrastructure Commission estimates heat decarbonisation will cost £120 – 300bn over the next 30 years. This will likely be borne by the customer not the taxpayer or shareholders. The researchers found that all technology packages between the two main pathways will result in an increase in the price of heat. Except for heat networks which are:

*“identified as a low regrets option with the potential to reduce carbon emissions at low or negative cost as part of any pathway, particularly through the utilisation of waste and environmental heat”* (p4).

And yet a major challenge for any energy infrastructure is the cost of capital. Research undertaken for the CCC by Imperial College found that:

*“For all pathways, low financing costs would be the primary driver for reducing the system cost as the low-carbon energy system costs are driven by the capital rather than operating costs”* (p20).

### **Reducing costs**

If capital is the primary driver what can be done to reduce its cost given that it will be borne by consumers over the long term? The cost of capital is affected by investors perception of the risk. The Heat Networks Bill currently passing through the Scottish Parliament is to provide the legislative underpinning for the introduction

of heat zoning in Scotland with the intention of creating certainty for investors in order to reduce the cost of capital. Whilst this does take us so far in reducing risk by providing priority to heat networks in designated district heating zones, it does not oblige building owners, particularly those large enough to act as an ‘anchor’ load, to connect to the heat network. And yet a finding of the evaluation of the Heat Network Investment Project pilot for BEIS found that:

*“The key risk, raised by all of the investors with whom we spoke, was demand risk”* (p57).

The Scottish Government’s first consultation on Local Heat & Energy Efficiency Strategies (LHEES) to allow the creation of district heating zones did include an ‘obligation to connect’. This was long stop power to be provided to local authorities which could invoke it only if a key ‘anchor’ load building refused to connect despite it being proven that it was in their long-term interest to do so. However, this disappeared from subsequent iterations and from the Bill itself. BEIS does not mention it at all. And yet it is a key recommendation of the recent report from University of Edinburgh on net zero localities.

### **Conclusion**

To conclude, Governments, north and south, need to recognise that technology selection and prioritisation according to local dimensions and a consequent obligation to connect to the chosen technology will affect investor perception of risk and consequently the overall cost of the decarbonisation of heat. Otherwise we run the risk of unwittingly falling into more costly decarbonisation pathways for which we will all pay but with adverse distributional impacts for particular sections of society, namely the fuel poor.

If our political leaders care about the fuel poor and believe in a just transition to a net zero carbon society then these challenges must be taken into account.

**Michael King**  
**Editor**

**Spotlight on: Net-zero: the road to low-carbon heat (CBI) July 2020**

On 22 July the CBI, in collaboration with the University of Birmingham, published a report on decarbonisation of heat. The report outlines the colossal challenge of decarbonising heat in the UK, what the challenge means for businesses, consumers and communities.

...

**Recommendation 12: Increase the funding available for heat networks and align with approaches to using waste and industrial heat. All new energy from waste plants and waste heat producing industries should be required to use waste heat to feed into heat networks where the location permits.**

The current funding for the Heat Networks Investment Project, HNIP, is £320 million with a further £270m announced for a new Green Heat Networks Fund in the budget of March 2020. The government should commit to raise funding to the level needed to achieve the Committee on Climate Change target; this would be £3 billion if the market demands.

All new energy from waste plants and waste heat producing industries should be required to use waste heat to feed into heat networks where the location permits. A mechanism to address demand risk and policies to place the heat networks industry on a level playing field with other networks may also be necessary to achieve the levels of growth needed to meet net-zero.

Further info

- Heat networks are a major component of future heat solutions, particular in high building density/population density areas where there is an economy of scale. The installation of heat networks into existing built up areas is disruptive and hence has greatest potential in new developments. However, to reach CCC targets for close to a fifth of heat being delivered through heat networks, retrofitted heat network connections will be required.
- Thought should be given in regional and local infrastructure planning for simultaneous electricity grid reinforcement and heat grid installation and development.
- The continuation of government support and funding is required to meet the scale of infrastructure required to ensure an adequate deployment of heat schemes. Heat networks also allow the use of waste heat from both industrial and waste incineration, which can displace heat produced by burning natural gas.

**Spotlight on: Heat Network Skills Review BEIS (September 2020)**

This report explores what skills are currently required by the industry and where the existing and future shortages are likely to be.

**Table 1.1: Summary of skills lacking by occupation**

Occupation	Skills lacking	Severity of skills gaps
Project Delivery Manager	Challenge finding new recruits with the relevant experience and understanding of the heat network landscape specifically as well as individuals with the commercial skills and experience of procuring large scale projects.	High
Heat Network Development Manager	Typically lack the breadth of roles required in this position, commonly possessing strong project management or engineering skills but rarely both.	High
Energy Master Planner	Acceptance that no-one comes to the role fully proficient Intricate knowledge of heat networks can be lacking among those transferring from other sectors, although most accept that this can be developed. There is also a lack of commercial and legal understanding	High
Control System Specialist	New recruits often do not come equipped with the full range of skills required, and in particular lack direct experience working in the heat network sector.	High
Design Engineer	There is a limited theoretical or practical knowledge and understanding of heat networks, which new recruits will need to learn early on, on the job.	Medium
Commercial / Operations Manager	Suitable business acumen is often the key skill lacking among organisations that struggle to find commercial managers with necessary proficiency.	Medium
Legal Specialist	While there is some relevant knowledge at more junior levels, those at more senior levels typically have limited experience of the heat network sector.	Medium
Financial Specialist	Similar to legal specialists, there is some relevant knowledge at more junior levels; those at more senior levels typically have limited experience of the heat network sector.	Medium
Operations and Maintenance Technician/ Inspector	There is a lack of good problem solvers, i.e. individuals who are able to inspect a system and understand it sufficiently to be able to resolve problems themselves.	Medium
Pipe Layer (including welding)	It is relatively easy for welders to work across different sectors, which means that knowledge of heat network systems themselves is often lacking (although these can be learnt with relative ease).	Low
Installer	It is relatively easy for installers to work across different sectors. The research did not unpick any particular skills lacking in this occupation.	Low

## UK News

September 2020: Net Zero Localities: ambition and value in UK local authority investment - September 2020 ([EnergyRev](#))

Decarbonising heat through low regrets options, such as low carbon heat networks, can be targeted. If every UK local authority developed one average sized heat network in an area of high heat density and diversity of demand, this would represent an investment of over £5.6 billion in low carbon heat supply.

21 September 2020: Heat network skills review ([BEIS](#))

Report exploring skills currently required by the heat network sector, likely existing and future skills shortages and potential skills interventions needed.

21 September 2020: North London energy centre gets green light ([Building](#))

Designed by Stewart Stephenson Architects, the 60MW low-carbon energy centre and district heating network in Edmonton will be used to heat homes in Enfield including those at the nearby 10,000-home Meridian Water development.

21 September 2020: Nottingham council says its debt is 'at risk of becoming unsustainable' ([NottinghamPost](#))

Nottingham City Council has issued a stark warning about the current level of debt, saying it is 'at risk of becoming unsustainable'. A new report, published by the city council, highlights a wide range of serious risk to the finances at the council.

These include:

...£300 million bill to upgrade London Road district heating network

18 September 2020: Metropolitan appointed by Redrow to operate the significant district heating network at Colindale Gardens, NW9 ([CambridgeNetwork](#))

The energy centre houses a 1.6MWe Gas CHP Engine, three shell and tube gas boilers, three condensing gas boilers, and has thermal storage of 100,000 litres.

17 September 2020: Glasgow boreholes reveal geothermal potential under city ([renews](#))

The UK Geoenergy Observatory in Glasgow has released data and images from below the Scottish city's surface as part of research into alternative renewable energy resources.

17 September 2020: Work being prepared on site for Eden geothermal heat and power project in Cornwall, UK ([thinkgeoenergy](#))

Preliminary work on the site for the planned Eden Geothermal project at the Eden Biomes is starting, preparing for the arrival of the drilling rig.

16 September 2020: Green Finance Institute launches the Zero Carbon Heating Taskforce ([GFI](#))

The Zero Carbon Heating Taskforce will conduct a focussed review to identify the barriers and enablers to investment into low-carbon heating across the UK housing market – including for on and off gas grid homes, new builds and district heating networks

15 September 2020: Ofgem seeks views to help design digital services for low carbon heat schemes ([EnergyLiveNews](#))

It follows a consultation launched by BEIS earlier this year, which included proposals for two new schemes to incentivise the cost-effective installation of low carbon heat technologies and the generation of renewable heat

10 September 2020: Heat Trust Summer Newsletter ([Heat Trust](#))

It covers updates from both Heat Trust and the wider heat network and customer protection fields.

10 September 2020: 'More glass than the Shard' in two new mega glasshouses ([Farmers Weekly](#))

They are also be home to the largest heat pump system project in the UK, having been built next to Anglian Water water-treatment facilities. The heat from the sewage works is pumped into energy centres serving the two greenhouses, providing the ideal temperature for the plants to help speed growth.

9 September 2020: Hull fires up low carbon district heating vision ([BusinessGreen](#))

"The development of the district heating network is a key strategic and infrastructure project for the city," said Councillor Daren Hale, portfolio holder for regeneration and economic investment.

8 September 2020: Heat Networks (Scotland) Bill Committee Stage 1 ([Scottish Parliament](#))

Witnesses: David Armitage (Society of Chief Officers of Transportation in Scotland)

Ken Brady (Energy Saving Trust)

Aoife Deery (Citizens Advice Scotland)

Stacey Dingwall (Scottish Federation of Housing Associations)

Scott Restrack (Energy Action Scotland)

Gavin Slater (Glasgow City Council)

Further information on Bill [here](#) and [here](#)

3 September 2020: Generating clean energy from the coal mines ([TheEngineer](#))

With a number of the UK's abandoned coal mines being repurposed for green energy projects, Jon Excell asks whether the legacy of Britain's polluting industrial past could hold the key to its low carbon future?

2 September 2020: Dundee unveils draft developer guidance on local heat networks ([ScottishHousingNews](#))

**Dundee City Council** already has a policy requiring developers to demonstrate that they have considered this method as a sustainable form of heating within their



scheme. Now councillors are being asked to approve a consultation on [draft guidance](#) taking developers through the necessary steps.

1 September 2020: Evaluation of the Heat Networks Investment Project (HNIP) pilot scheme ([BEIS](#))

1 September 2020: Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020-2021 ([Scottish Government](#))

We will start by opening a new funding call of the £50 million Green Recovery Low Carbon Infrastructure Transition Programme (LCITP) in September to support low carbon and renewable heat projects in Scotland. This is a capital funding call seeking projects with a broad low carbon infrastructure focus on heat decarbonisation, smart energy systems, local energy systems and demonstrator projects.

1 September 2020: Cost of installing heating measures in domestic properties ([BEIS](#))  
A study providing cost data for different heating appliances.

31 August 2020: Sustainable energy project to heat over 1,000 London homes ([newsletter](#))

A revolutionary green energy project by Cookstown company Colloide Engineering systems in conjunction with Ramboll, Cullinan Studios London and McGurk Architects Magherafelt is in the running for three prestigious architecture awards.

31 August 2020: Will Scotland warm to the idea of district heating? – Sarah Stewart ([The Scotsman](#))

There are two key factors restricting their use: the significant capital cost required up front, and the lack of regulation which has made them unpopular with consumers and investors. The Scottish Government is the first within the UK to take steps to address the current concerns with district heating by publishing the Heat Networks Bill.

August 2020: Heat and Energy Efficiency Zoning ([ADE](#))

This paper contains policy proposals for the UK, Scottish and Welsh Government ('the governments') to create a national framework for decarbonising heating and deploying energy efficiency solutions.

27 August 2020: Heat pump retrofit in London ([Greater London Authority](#))

The Mayor of London, Sadiq Khan, commissioned the Carbon Trust, to produce these two reports which explore what a heat pump retrofit actually means on a building level and the kinds of policy and support mechanisms that will be needed to drive individuals to switch their buildings to low carbon heating systems.

25 August 2020: Scottish RPs offered £20m 'fast track' pot to decarbonise homes ([socialhousing.co.uk](#))

Scottish associations are being invited, from next week, to apply for a chunk of £20m government funding to help a drive towards decarbonising social housing.

24 August 2020: District heating scheme generates income for charitable trust ([ShetlandNews](#))

SHETLAND Charitable Trust has benefitted from a £190,000 surplus generated by the Lerwick district heating scheme.

18 August 2020: Bridgend's plans to pipe low-cost heat to houses and public buildings move forward ([Wales Online](#))

If all goes to plan, the first phase of the project will see a combined heat and power boiler installed at Bridgend Life Centre that will be up and running by 2022.

17 August 2020: Manchester's civic heat network project passes significant milestone ([Smart Cities News](#))

The final sections of the UK city's 40 metre high Tower of Light have been installed, which will act as a chimney for a low carbon energy centre.

14 August 2020: Taking the temperature: consumer choice and low carbon heating ([CitizensAdvice](#))

We draw out 3 key lessons:

- Early communication will be vital: the way people react to any policy that restricts their choice will depend on their understanding of the government's wider priorities
- Government will be expected to mitigate risks: particularly if low carbon heat options are made mandatory, consumers will expect government to minimise any risks that they might be exposed to
- Consumers will want to retain control in some areas: people who have less control over the heat system in their home will need extra reassurance about cost and quality

13 August 2020: Cardiff district-heating receives £15m boost ([Let's Recycle](#))

The £26.5 million Cardiff City Heating Network has secured £15m in loans and grants to begin the first phase of works in its construction.

23 July 2020: Community renewable energy project backed by county council wins £2million grant ([CambridgeNetwork](#))

The Heating Swaffham Prior project, which Cambridgeshire County Council is developing with Swaffham Prior Community Land Trust, will help the village move away from using oil for heating and hot water. Instead, heat extracted from the ground and air will be used, saving thousands of tonnes of carbon emissions over the project's lifetime. The grant was awarded by the Heat Networks Investment Project (HNIP) which is supported by the Department for Business, Energy and Industrial Strategy (BEIS).

22 July 2020: THERMOS - a nine-month extension to embed the gains made so far ([CSE](#))

THERMOS (which stands for Thermal Energy Resource Modelling and Optimisation System) was funded by the European Union's Horizon 2020 Programme for Research and Innovation. There were 14 partners in the project from eight countries (see foot

of page for a list of these). The aim of THERMOS was ambitious: to make it easier, quicker and cheaper to design district heating and cooling systems.

22 July 2020: Net-zero: the road to low-carbon heat ([CBI](#))

A new Heat Commission established by the CBI and University of Birmingham has published a series of recommendations aimed at decarbonising heat as part of a strategy to achieve the UK's climate commitments on net-zero.

July 2020: What we need to do, and when: three roadmaps for decarbonising UK heat by 2050 ([Net-Zero Infrastructure Industry Coalition](#))

16 July 2020: Burning waste 'could heat half a million UK homes and support net zero goal' ([EnergyLiveNews](#))

A new report suggests diverting 80% of the country's non-recyclable waste for green heat could also help avoid four million tonnes of carbon emissions by 2030 alone

15 July 2020: All hands to the pump: A home improvement plan for England ([IPPR](#))

This report makes the case for an ambitious investment programme to deliver household improvements across the country to be put at the heart of the economic recovery from Covid-19.

July 2020: Heat mapper: What's the right fit for decarbonising heat in your building? ([Verco](#))

The decarbonisation of heat in buildings is essential if the UK is to meet its long-term carbon targets. A dizzying variety of options are available to decarbonise non-domestic buildings at scale. Deciding on the right technology can be difficult, with considerations around cost, ease of installation, comfort and carbon savings.

1 July 2020: Clydebank's heating project will create green energy network ([ClydebankPost](#))

West Dunbartonshire Council has set up a limited liability partnership as an energy services company with the Clydebank Property Company to create direct heating on the waterfront. The council, which will invest a further £2.058million in the project, will be responsible for the commercial operation and ongoing management of the heat network. The project was discussed at a full council virtual meeting last week.

1 July 2020: UK renewable heat projects "at huge risk", say biomass groups ([Bioenergy News](#))

The UK could see a "vast reduction" in renewable heat projects over the next 12 months and a potential return to fossil fuels if current government proposals are approved, according to the UK Pellet Council and Biomass Heat Works!.

The online 'Future Support for Low Carbon Heat' consultation being delivered by the Department for Business, Energy and Industrial Strategy outlines options to replace the renewable heat incentive (RHI) scheme, which closes in March 2021. Proposals include a Clean Heat Grant Scheme whereby biomass heat projects could receive a maximum support grant of £4,000 (€4,422).

## International News

21 September 2020: Transforming homes into power stations - how Sweden is disrupting energy production ([World Economic Forum](#))

...Meanwhile local 'district heating' plants are using excess heat to produce over 75% of the warmth that Swedish households need.

17 September 2020: Horizon 2020 Work Programme ([European Commission](#))

Renewable energy-based systems for district heating and cooling (DHC) and for cogeneration of heat and power (CHP) can play a key role in energy system integration, and make a significant contribution to the decarbonisation of the energy system. The [Energy System Integration Communication](#) (July 2020) points as one of the solutions towards an acceleration of smart, highly-efficient, renewables-based district heating and cooling networks COM2020(299). Renewable energy-based DHC and CHP systems that are at the same time robust, reliable and flexible to respond to peak demands require effective and efficient combinations of different renewable energy sources in the same system.

September 2020: Impact of thermal masses on the peak load in district heating systems ([Energy](#))

Thermal masses of district heating network components are analysed independently.

16 September 2020: Renewable heating and cooling is essential for EU's stronger ambition on Climate and Green Recovery ([SolarHeatEurope](#))

The heating and cooling sector represents 51% of final energy consumption in Europe and approximately 27% of EU carbon emissions. As such, decarbonising this sector is crucial for European carbon neutrality goals and renewable heat solutions are key in making that happen.

14 September 2020: AI steered district heating - a success in Gustavsberg ([Vattenfall](#))

Smart algorithms enable optimisation of district heating in an apartment building. Vattenfall's digitisation project in Gustavsberg shows lower costs, reduced carbon footprint and more satisfied customers.

10 September 2020: Power-to-heat for district heating may drive wind and solar ([PV-magazine](#))

Researchers say the technology could help drive clean energy deployment in countries with limited grids or in isolated, coal-based energy systems. According to their model, Kosovo could see a strong increase in wind and PV capacity if power-to-heat is coupled with thermal energy storage for fixed-capacity district heating.

17 July 2020: Climate-friendly cooling could cut years of greenhouse gas emissions and save trillions of dollars ([IEA](#))

Coordinated international action on energy-efficient, climate-friendly cooling could avoid as much as 460 billion tonnes of greenhouse gas emissions – roughly equal to eight years of global emissions at 2018 levels – over the next four decades, according to the Cooling Emissions and Policy Synthesis Report from the United Nations Environment Programme (UNEP) and the International Energy Agency (IEA).

15 July 2020: Coupling the heating and power sectors: The role of centralised combined heat and power plants and district heat in a European decarbonised power system ([Applied Energy](#))

A description of the EU heating sector including spatial analysis.

9 July 2020: No more fossil fuels for new buildings in Vienna ([Energy-Cities](#))

Each climate protection area is identified based on the possibility to supply its energy needs with district heating systems. In addition, at least one additional climate-friendly heating system based on renewable energy or waste heat must be feasible. The city estimate that by autumn 2020, climate protection areas will enter into force in 8 out of 23 districts of Vienna. The rest will follow in 2021.

7 July 2020: Facebook data centre serves up heating for 7,000 Danish homes in scheme that will cut city's carbon emissions ([inews](#))

Facebook, which went public with the project, said its site is providing about 100,000MWh of heat each year – enough to warm about 6,900 homes.

July 2020: Hot Cool Newsletter ([DBDH](#))

Decarbonizing is all about solutions reducing CO2 emissions - linked to the district heating network, utilizing excess electricity from wind turbines and solar cells, surplus heat from data-centers, eFuel production, and heat pumps absorbing energy from the ocean.



## Events

Tuesday 29 September 2020:

[Webinar - Scotland's role in the development of heat pumps](#)

This paper follows the development of the heat pump and considers the role played by Scotland in that process

10-12.30pm 30 September 2020

[IrDEA CPD - Smart District Heating Network Engineering & Optimisation](#)

by Irish District Energy Association

This is the second of a series of training courses organised by the IrDEA for its members and the wider district energy community in Ireland.

11am – 12pm Thursday, October 1, 2020

[Towards efficient, low carbon heat networks for social housing](#)

FairHeat, Guru Systems and Sycous share best practices using case studies from social housing operators across the UK.

8 October 2020:

[The energy transition in cities: district heating](#)

Sari Mannonen, Senior Vice President, Solution business, Helen (TO BE CONFIRMED)

Anders Dyrelund, Senior Market Manager, Ramboll Energy

Helen Carlström, Business Developer, EON