

# District Energy Vanguards Network Newsletter

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## Editorial

### Which way to go?

Earlier this month the Consumers Association's magazine Which? published its long awaited [report on the customer experience of district heating](#). This has been welcomed by the industry and provides a useful perspective. But it also holds a painful mirror up to the face of the industry. Poor design and construction, obscure pricing mechanisms, piecemeal customer complaint handling – all delivered by a fragmented industry. And lurking behind it is the nasty suspicion of price gouging for profit. Which? highlights that there is a lot for the district heating industry to work on and improve.

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The report also gives a half-hearted welcome to the new [Heat Trust](#). Whilst acknowledging it as a necessary first step, its primary criticism is that a voluntary and industry-led scheme lacks teeth and credibility. It builds a case on why a voluntary approach will not work citing evidence from other voluntary schemes in the gas and electricity industries. By contrast it does not apply the same test to its faith in customer choice. Instead it accepts Ofgem's argument that consumer choice is the absolute guarantor against market abuse. Given that large numbers of domestic gas and electricity customers are resistant to the regulator's exhortations to switch and the market is widely regarded as 'broken' and currently the subject of a CMA investigation this is somewhat surprising.

A key concern identified is that customers cannot easily understand the comparison with other fuel systems due to the complexity of what is and what is not included in the prices they are paying. Which? suggests that this complexity might be reduced for customers through the development of a heat price comparator. But then recognises that there might be a need for two comparators to deal with privately owned and tenanted properties to address the thorny old question of the capital and maintenance costs of gas and electric systems being covered through the rent for tenants whereas for district heating these costs are covered in the standing charge. What is needed here is a level playing field and it may not be one that the industry alone can provide.

However, the report also reveals a wide range of prices and tariffs between different schemes. This is something the industry could deliver by operators making their tariffs available for the Heat Trust or National Measurement Office to publish online, similar to Denmark, to allow easy comparison of the charges made by different schemes. This would expose poorly performing schemes and place competitive pressure on them to improve.

Ultimately, it is argued, that in the absence of effective competition there is a need for consumer protection regulation. Most observers agree that this is the direction of travel. Indeed the Scottish Government has already commissioned its District Heating Experts Commission to look into it. What is under debate is the form and degree of regulation required. The Which? report suggests the cost of the Heat Trust will be a potential barrier. Heavier regulation will mean even heavier costs for a small market. Could this be addressed by the Government meeting the cost of regulation for the present and recouping it from heat networks once to market has matured?

Lastly, the Which? report also revealed positive features. Calculations on pricing show that district heating can deliver the lowest prices for customers. Up to 50% at the widest point when compared with gas and 200% when similarly compared with electricity. These benefits cannot be achieved in the mainstream competitive energy markets. There is a seeming customer preference for flat rate charging over metering. And customer reassurance can be derived from municipal involvement in the governance of projects. These observations may fly in the face of current orthodoxy but if a better approach is to be built are these some of the building blocks?

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Which? has made a helpful start to a debate that needs to be faced up to no matter however painful. Most members of the Vanguard Network are deeply concerned to protect the interests of heat network customers within their areas and I hope they will play a vocal part in this debate. No doubt we will return to this issue.

*Michael King, Editor, 30<sup>th</sup> April 2015*

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## **UK, devolved and EU administrations**

### **Policy, regulation, consultations, guidance and funding**

**1 Apr** – [new Energy Company Obligation \(ECO2\) launched](#) – ofgem have announced that ECO2 will run from 1 April for the next two years to 31 March 2017.

### **UK conferences, workshops and awards**

**4 Sep** – [ADE Awards - applications now open](#) – applications are now being taken for the ADE's annual Awards showcasing innovation, best practice and achievements across CHP, DH and energy services. **Deadline for applications is Friday, 4 Sep.**

**16 Jun to 8 Jul** – [heat pump training roadshows 2015](#) – DECC is running a series of free one-day training courses, designed to help potential heat pump customers such as businesses, developers and housing providers, understand how heat pumps can deliver lower energy costs, greater comfort and better buildings.

**22-26 Jun** – [short course on CHP \(Cranfield University\)](#) – the course will build up the delegates' understanding and knowledge of CHP technologies with conventional fuels and renewables.

**17-18 Jun** – [3rd International Solar DH Conference \(Toulouse, France\)](#) – the focus will be on sharing international experiences of SDH, urban planning aspects, business models, the latest advanced concepts as well as new products and components for SDH.

**13 May** – [Heat Networks: making affordable, low-carbon heat a reality \(Edinburgh\)](#) – the Conference is organised jointly by the [ADE](#) and the [Scottish Heat Networks](#) Partnership Practitioners Group.

**6-7 May** – [All-Energy 2015 Conference Programme \(Glasgow\)](#) – seminars for this year's All-Energy conference include DH, Geothermal, EfW and many other related topics.

**28 Apr** – [Scottish Renewables Low Carbon Heat Conference 2015 \(Perth\)](#) – presentations from this event can be downloaded from [here](#)

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## UK News

**27 Apr** – [SSE to cut domestic DH tariff by 4.6%](#) – the move, which will come into effect on 1st May, is expected to benefit 4,500 customers in England and Scotland and is reflective of “a general downturn in domestic gas prices”, the Big Six supplier said.

**24 Apr** – [apprentices help with University of Glasgow DH scheme](#) – the apprentices will be working on the scheme as part of a work placement with the contractor, Crown House Technologies, who are currently carrying out the linked [trenching works and excavations](#).

**21 Apr** – [South Cumbrian biomass firm commended for DH project](#) – the project saw the installation of a 700kw biomass boiler along with an extensive piping system to heat a number of areas of the 11th-century Armathwaite Hall Country House site.

**20 Apr** – [ENER-G Switch2 welcomes Which? proposals to protect DH customers](#) – the Director of the metering and billing specialist, Kirsty Lambert, said: that many of the issues raised in the report are already being addressed, such as the new Heat Trust, which will introduce self-regulation to the sector.

**16 Apr** – [130 social tenants to benefit from micro-DH system \(Burton-upon-Trent\)](#) – the heat pumps will be connected to Kensa’s ground source heat network system, harnessing support funding through a combination of [ECO](#) and the non-domestic [RHI](#).

**14 Apr** – [abandoned coal mines could heat UK homes again \(Nottingham\)](#) – the Innovate UK-funded project explored redundant mines over a 30km area that have the potential to produce enough energy to heat 45,000 homes.

**8 Apr** – [heat network seminar success](#) – the seminar on the new [Heat Network \(Metering and Billing\) Regulations 2014](#) was jointly hosted by ENER-G Switch2 and Winckworth Sherwood. For more information see ENER-G’s [heat networks resource hub](#) or downloaded from their [detailed guide to the regulations](#).

**7 Apr** – [water source heat pump proposal under consideration \(Lewes, Sussex\)](#) – the WSHP-DH system would see businesses and 416 new homes heated using water drawn from the River Ouse.

**7 Apr** – [Green and European investment banks support CHP and DE projects](#) – both the [GIB](#) and [EIB](#) are doing what state-owned investment banks are good at which is investing in green infrastructure projects - especially in cities where growth is taking place.

**7 Apr** – [Which? report highlights need for regulated DH market](#) – the consumer watchdog has called on the Government to reconsider allowing the UK's emerging DH market to operate without regulation, after research revealed that many customers feel ripped off and confused by contracts they cannot escape from. The Which? press release can be read [here](#) and a copy of the report [here](#).

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**2 Apr** – [company to research mine water based DH scheme \(Cumbria\)](#) – the £120,000 funding of from the [Renewable Energy Test and Education Centre](#) will be used to test the feasibility of using water from the Florence Mine in Egremont for use in a DH scheme.

**1 Apr** – [election campaign reaches geothermal DH plant \(Southampton\)](#) – the plant heats many of the city's most prominent buildings which include TV studios, a hospital, university, shopping centre, civic centre, residential buildings and several hotels.

**31 Mar** – [Which? report calls for protection for Scottish DH consumers](#) – the consumer watchdog has called for the Scottish Government action to better protect consumers after officials announced ambitious new targets that would see Scotland deliver five times more heat through DH to help Scottish householders and businesses lower their energy bills.

**31 Mar** – [work begins on £9m Greenock insulation and DH project \(Scotland\)](#) - more than 500 homes will benefit from solid wall insulation and DH. The project has attracted financial support through [ECO](#) and a Scottish Government funding scheme for home refurbishment work which is administered by Inverclyde Council.

**27 Mar** – [resident slams DH scheme \(Platts Common, Barnsley\)](#) – a spokeswoman for Berneslai Homes (an [ALMO](#)) stated that the residents' heating bills will be investigated to see if they are reasonable and that he would be will contacted about the matters raised.

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## UK Tenders

A list of tenders which include the [CPV code](#) for district heating can be viewed [here](#).

## UK Jobs

A list of district heating related jobs can be viewed [here](#).

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## Europe

NB articles marked **(R)** require free registration to view.

**24 Apr** – [Savo-Solar and Dansk Energi Service sign solar thermal agreement](#) – the agreement will see the DH specialist, Dansk Energi Service, selling Savo-Solar's collectors as a part of their offering of full turn-key solar thermal installations in Denmark.

**21 Apr** – [Statkraft to invest in renewable energy startups via new VC unit](#) – the Norwegian state-owned utility is launching a corporate venture capital (VC) business in Germany with the goal of investing in distributed and renewable energy startups, including DH.

**17 Apr** – [EU energy ministers debate energy efficiency and DHC \(Riga\)](#) – key topics of discussion included the main barriers to an effective heating and cooling market, issues addressing DH, and access to financing for cost effective and sustainable DH&C.

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- 17 Apr** – [green data centers seen as growing opportunities for DH&C](#) – energy efficiency can be further improved by harnessing the huge amount of surplus heat generated into existing DH networks -- as Apple plans to do in their new data center in Viborg, Denmark.
- 16 Apr** – [Amsterdam aims to totally decarbonise through DH](#) – the spokesperson from the waste management company, [AEB Amsterdam](#), said that the city initially plans to increase its existing heat network connections from 10% to 40% of the city within 25 years.
- 13 Apr** – [how Warsaw's DH system keeps the capital cleaner than Kraków](#) – the system has spared the capital's 1.6m population from the pollution that plagues Kraków, where thick black soot wafts from the chimneys of residents who burn coal at home.
- 8 Apr** – [DH customers to benefit from new electric boiler \(Aarhus, Denmark\)](#) – the boiler was installed by DONG energy at the [Studstrup power station](#) and will be operated during periods of low electricity price, typically on windy days, to generate heat for the DH grid.
- 7 Apr** – [two biomass DH plants approved \(Klagenfurt, Austria\)](#) – having overcome legal challenges, RZ Pellets will build the two plants which will provide 15MW of heat for around 25,000 households and will [replace an existing oil-fired unit \(R\)](#), which will be converted for use as a gas-fired peaking plant.
- 5 Apr** – [seawater DC plant building gets architectural makeover \(Copenhagen\)](#) – one of the city's first power stations has been converted and extended to accommodate a seawater cooling plant and administration office.
- 2 Apr** – [DHC features strongly in CITYFiED project](#) – one of the project's eleven City Cluster representatives is the Estonia city of Tartu which has a strong set of experiences in DH&C that reach up to 90% penetration in some areas.
- 30 Mar** – [Fortum to build new multi-fuel CHP-DH plant \(Zabrze, Poland\)](#) – the 75MWe, 145MWth capacity plant will cost approx. €200m and provide DH to 70,000 households. The plant will replace existing wholly coal-fired units and will be fuelled by up to 50% of locally sourced [RDF](#) and coal but can also use biomass and a mixture of fuels.

## European tenders

A list of tenders which include the [CPV code](#) for district heating can be viewed [here](#).

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## The Americas and Africa

- 22 Apr** – [DC utility to buy ~50% of its electricity from community "solar gardens"](#) – the utility company, [District Energy](#), cools more than 100 buildings in St. Paul's downtown business district. (Minnesota)
- 20 Apr** – [Heating the Midwest conference considers biomass DH \(Minnesota\)](#) – delegates heard a presentation on the state of Upper Austria where there are 330 biomass DH plants servicing the heating requirements of 40% of homes.

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- 20 Apr** – [DE network key to delivering longer term cost reductions \(Vancouver\)](#) – a city report shows the city's [False Creek DH utility](#) produces 66% less GHGs compared to natural gas utilities with residents paying about \$100 per MWh of heat compared to grid electricity at about \$104 and \$90 for natural gas-fed boilers.
- 16 Apr** – [city's ruling party insist on DH network connection \(Vancouver\)](#) – a large piece of city-owned land is reserved for the energy provider, Creative Energy Canada Platforms, to build an energy centre that will produce heat from biofuel such as wood chips.
- 15 Apr** – [South Africa's first sustainable green precinct uses DC \(Johannesburg\)](#) – the Melrose Arch precinct is packed with smart green touches including a central DC plant that utilises evaporative cooling so its buildings use less air conditioning than usual.
- 14 Apr** – [test drilling begins for Blatchford DE system \(Edmonton\)](#) – the city will be bringing forward a recommendation for the DE system to council later this year.
- 7 Apr** – [prestigious development to use DC \(Lagos, Nigeria\)](#) – the first phase of the Azuri Peninsula project, which is part of the new [Eko Atlantic](#) development, will house 120 families provided with DC air conditioning.
- 3 Apr** – [sewage company expresses interest in joining DE project](#) –the city's (Halifax, Nova Scotia) city's sewage treatment facility is close to the Cogswell redevelopment and it is more economical to build in a DE system during construction rather than retrofit later.
- 27 Mar** – [lessons to be learned in North America from DH in Europe](#) – the author cites Sweden and the EU funded CITYFiED project as useful exemplars.

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## China, Asia and Australasia

NB articles marked (R) require free registration to view.

- 26 Apr** – [DC plant wins energy efficient award \(Doha, Qatar\)](#) – the plant was designed with features including efficient lighting, ventilation and outside air heat recovery. Once fully operational, the plant will supply 29,250 TR to the Msheireb Downtown development.
- 25 Apr** – [Ras al-Khaimah Free Trade Zone opens new DC plant \(UAE\)](#) – the AED 25m (£4.5m) plant is the second DC plant in the emirate, and the first one in the emirate that was built for a non-commercial use.
- 21 Apr** – [air-conditioning units illegally shut down by DC utility company](#) – the service provider, Palm District Cooling, said the move was part of a process to pressure landlords to paying overdue service fees and to register for new chiller meters.
- 21 Apr** – [DC features as key technology in UAE State of Energy report](#) – the government intend to develop capabilities across various technologies including solar, energy efficiency, DC and green building construction.

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- 14 Apr** – [DC Pro CEO wants to change perceptions of district energy](#) – in this interview [George Barbari](#) promotes a model of trigeneration that has a distribution centre that is much closer to the city centre, and where energy recovery is more efficient.
- 14 Apr** – [DC foregrounded in interview with UAE Ministry of Energy spokesperson](#) – the interview covers diverse topics including renewable energy, [trigeneration](#) and subsidies.
- 12 Apr** – [Saudi Binladin wins Town Square contract \(Nshama, Dubai\)](#) – the contract includes excavation and backfilling for pipes needed for the area's DC network across the Zahra and Hayat Townhouse communities.
- 8 Apr** – [Empower awards DC contract for Business Bay project \(Dubai, UAE\)](#) – the Dh186m (\$50.2m) contract to develop the company's third DC facility in the Business Bay district will see a 45,000 RT plant constructed by Gulf District Cooling.
- 9 Apr** – [integration of DH system generates interest \(Manisa, Turkey\)](#) – using waste heat from one of [SEAS's](#) 14 lignite fired power plants could potentially provide heat for nearly 28,000 homes. The delegation from the [CITYFIED](#) project also inspected a new type of composite DH pipe expected to have greater longevity than existing solutions.
- 6 Apr** – [Empower's Business Bay facility achieves LEED Gold certification \(Dubai\)](#) – the DC services provider announced that its second Business Bay facility attained a Gold rating in Leadership in Energy Efficient Design ([LEED](#)) - the first in the Middle East region.
- 2 Apr** – [NF Energy develops ties with Finnish DH valve company \(China\)](#) – the majority of [NF Energy's](#) revenues are from energy efficient flow control solutions. [Vexve Oy](#) has a lion's share in the DH&C valves market in Finland .

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## International conferences, symposiums and forums

- 30 Aug–5 Sep** – [3<sup>rd</sup> edition of the International DHC+ Summer School \(Turin, Italy\)](#) – the School is designed to provide a clear introduction to DHC technology, operational issues, and consumer determinants in evolving energy systems. The School will combine theoretical lectures with practical application, site visits and networking opportunities.
- 25-27 Aug** – [4th Annual Asia Pacific District Cooling Conference \(Bangkok\)](#) – this three day event will include sessions on regulation, design, awards, technology and operations.
- 17-18 Jun** – [3rd International Solar DH Conference \(Toulouse, France\)](#) – this event will focus on sharing international experiences on the realization and operation of solar DH projects, so that newcomers in the field can benefit from international expertise.
- 26–27 May** – [harbourside short-term storage and DH for shipping \(Gothenburg\)](#) - this workshop will cover the technical aspects of connecting a ship in harbour to DH. The second day will cover marketing, investments, cost management, price models, partnerships, competitive analysis and more. More info and registration via [email](#)

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**26-29 Apr** – [4th Global District Energy Climate Awards \(Tallinn, Estonia\)](#) – over 250 attendees from organisations across the world met to celebrate success and collective attainment. The event was held in conjunction with the [37<sup>th</sup> Euroheat & Power Congress](#).

**14-15 Apr** – [5th Annual Small Modular Reactor Summit 2015 \(Charlotte NC\)](#) –see [here](#) and [here](#) for presentations from the summit.

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## General interest, technology and research

NB articles marked (P) may need to be purchased.

**13 Apr** – [reasons in favour of migrating to wood fuel systems with DH](#) – wood burning DE systems have seen substantial savings even over natural gas.

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[Link to the glossary of terms and acronyms](#)

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