

# District Energy Vanguards Network Newsletter

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## Editorial

Events appear to move slowly when examined from close up. But pulling back to consider them over a year it becomes possible to take a broader perspective. From this viewpoint one can see that much progress has been achieved for UK district energy development.

A milestone was the March 2013 publication of DECC's '[Future of Heating](#)' setting out the Government's programme to address the heat market. This covered demand and supply side measures. But the backbone to achieving the Government's objectives was a package of measures to deliver district heat networks, including funding development activities in the Pioneer Cities and the establishment of a Heat Network Delivery Unit (HNDU). In Scotland the [District Heating Expert Commission](#) had delivered its recommendations at the back of 2012 and, in June of this year, the Scottish Government responded with their [District Heating Action Plan](#) outlining their vision including the establishment of a Heat Network Partnership. A key feature of both Scottish and UK proposals was the centrality of local government.

Fast forward to the autumn and the first round call for applications from HNDU has reportedly elicited 50 proposals from 28 local authorities. Consultancies and contractors are refreshing their business development activities in expectation. Conference organisers have discovered district energy as a theme for a number of events. Recently three to four

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councils have advertised posts specifically for District Energy Project Officers, making it a new category of local government employment.

Alongside this activity the [Vanguards Network](#) has established this newsletter and hosted two packed events to tease out the debate on policy and financing. Sheffield City Council is using some of the Pioneer Cities funding allocated to them to develop a *Gross Value Added* methodology to identify the economic benefits of investing in district energy, Gateshead Council has pressed the 'go' button their major town centre heat network, SELCHP in Southwark have finally added back the 'H' and both Islington's Bunhill Network and Aberdeen Heat & Power have won major national and international awards.

Disappointingly the DCLG appear to be watering down commitments under Zero Carbon Buildings policy and seeking to undermine council's discretion to specify local targets for energy efficiency standards under the Housing Standards Review, although the Greater London Authority has responded to the consultation to declare their ambition to retain their powers to do so. Additionally the Energy Company Obligation (ECO) was earmarked for contraction under the recent Green Levies Review. Nevertheless district heating became a primary measure under ECO, possibly because it features in many of the 50 proposals to HNDU.

Over the time frame of a year there will be inevitably be a mix of positives and negatives. However, when considering the balance it is possible to say that it has been a reasonably good year in setting out a pathway for the future.

Now to deliver it!!!

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## UK and EU Policy

### Open consultations and funding

[DECC heat metering consultation to be published in January](#) – this consultation will be in response to the metering and billing requirements of the [EU Energy Efficiency Directive](#) as they apply to district heating, district cooling and communal heating and/or hot water.

**18 Dec** – [EU consults on draft rules for state support in energy and environmental field](#) - the Commission proposes to exempt certain categories of aid from prior scrutiny under the state aid rules by including them in the General Block Exemption Regulation. This would include, for example, public support to promote district heating. Comments can be submitted **until 14 Feb 2014**.

**4 Dec** – [DECC have produced an application and guidance pack](#) for local authorities to gain financial assistance from round 2 of the HNDU Funding Stream which is now open and will **close on 31 Jan 2014**.

**Dec** – [The Carbon Trust are offering assistance with round 2 applications to HNDU](#) – the second call for applications for funding from the DECC Heat Network Delivery Unit is now open and will **close on 31 Jan 2014**.

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**13 Dec** – [Energy and Carbon Master Plan consultation \(Glasgow\)](#) – this survey asks you about Glasgow’s vision for sustainable energy; the benefits it can bring and the climate change targets that the City is aiming to meet. **The deadline for comments is 9 Jan 2014.**

**13 Nov** – [ETI seeks proposals for a project to reduce DH network costs](#) – the deadline for requesting attendance at the Workshop for Respondents is 7 Jan 2014 and for notification of an intention to **submit a proposal is 20 Jan 2014**. The closing date for **submission of proposals is 4 Feb 2014**.

[Localised energy systems - a cross-sector approach](#) – the [TSB](#) and the [EPSRC](#) are to invest up to £11m in a programme of collaborative research and development to stimulate innovation in localised energy systems. **This is a two-stage competition that opens for applicants on 20 January 2014.**

## Reports, documents and UK Seminars

**25 Feb** – [ImecE seminar “District Heating 2014” \(London\)](#) – what are the challenges of implementing DH projects and how do we address them in the UK market?

**16 Dec** – [New market research report "UK District Energy 2013" available](#) –there has been a growth in interest in the past five years or so on the part of energy companies, planners, central government, and certain types of clients.

**4 Dec** – [DECC response to non-domestic RHI consultation published](#) – the policy recognises the benefit of getting a better use for biomass by putting it into CHP plants rather than heat only boilers or power stations.

**4 Dec** – [DECC response to RHI: air to water heat pumps and EfW published](#) – the policy recognises the benefit of getting a better use for biomass by putting it into CHP plants rather than heat only boilers or power stations.

**2 Dec** - [DECC announce revamped ECO policy including DH](#) –as part of a strategy to reduce energy bills, DECC cites DH as being central to its energy efficiency platform.

**Dec** - [Next Steps in Financing District Energy presentations posted](#) –the presentations were made at November’s Local Authorities Vanguard’s workshop and can be found towards the bottom of the page.

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## UK News

**16 Dec** – [CHP saves hospital over £240k per annum \(Salisbury\)](#) –the 850kWe CHP system will pay for itself within five years and also reduce CO<sub>2</sub> emissions. The plant delivers heat via a 520m DH network to a spinal treatment centre and surgery unit.

**15 Dec** – [valve failure causes DH pipe burst in dwelling loft \(Sheffield\)](#) –the council have apologised to Mr Gill and are carrying out checks on the pipes in neighbouring homes.

**6 Dec** - [Mayor of London seeks meeting with CLG Secretary of State](#) –the Mayor’s concerns relate to proposed changes set out in the Housing Standards Review report and consultation which could “undermine a key tenet of DECC’s Heat Strategy for cities”.

**4 Dec** - [CHPA welcomes support for biomass CHP under non-domestic RHI scheme](#) –the Government’s consultation response outlines new dedicated support for high efficiency biomass CHP installations to receive 4.1p kW of heat produced.

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**4 Dec** - [Accruing social benefits from decentralised energy schemes](#) –decentralized energy generation avoids many of the risks associated with the more traditional centralized approach and can also provide social benefits - article from Uityx Asset Management.

**4 Dec** - [Swansea Council to assess prospect of DH networks](#) –the Council has applied to DECC for funding to cover a feasibility study into the potential of implementing DH networks throughout the city.

**2 Dec** - [London's first EfW DH scheme launched](#) – the Deptford based [SELCHP](#) commercial partnership will supply heat and hot water to 2,500 homes in five council estates across Bermondsey and Southwark.

**27 Nov** - [Green Investment Bank to invest in DH](#) – climate change minister Greg Barker announced at the recent Heat 2013 conference that the GIB is planning to back DH as interest in opportunities for renewable heat grows.

**27 Nov** - [second round for heat network bids announced](#) –the launch of the second round of bids for heat networks was announced at the recent Heat 2013 conference in London.

**27 Nov** - [Will district heating schemes lead to “monopolies”?](#) – concerns were raised at the recent Heat 2013 conference about whether DH schemes in the UK will effectively leave consumers at the mercy of a monopoly.

**26 Nov** - [Gateshead Council gives green light to North East's first DH scheme](#) – initially the scheme will serve nine buildings, but there are plans to connect 400 homes and at least six public buildings by 2015.

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## Europe

**17 Dec** –[Sabac DH upgrade - feasibility study \(Serbia\)](#) – the feasibility study will include the replacement of existing gas fired boilers with new boiler(s) fired by locally sourced biomass and an investment in a small-scale biomass CHP of up to 1 MWe.

**16 Dec** –[Helsinki based Wärtsilä supplies two CHP plants to Chelyabinsk \(Russia\)](#) – the 20MW plant is part of the local administration's programme to upgrade the DH system by replacing outdated boiler plants with modern power generation technology.

**16 Dec** –[Construction of 14MW biomass DH system underway \(Valladolid, Spain\)](#) – the system will heat 24 University buildings and 7 local and regional government buildings.

**11 Dec** – [new CHP gas-fired plant commissioned \(Riga, Latvia\)](#) – the new plant has a total capacity of 832 MWe, 554 MWh – significantly boosting heat supply to Riga's DH system.

**11 Dec** – [new CHP coal-fired plant commissioned \(Lünen, Germany\)](#) – the new 750MWe plant has an electrical efficiency of almost 46% and will supply the city of Lünen with DH.

**5 Dec** – [new ESO office extension to use geothermal DH \(Munich\)](#) – both new buildings will use concrete core activation heating and cooling for which groundwater is used together with a heat pump and geothermal DH.

**3 Dec** – [Slovakian DH scheme purchase 10 heat scavenging Green Machines](#) – on a DH system, the ORC Green Machine utilises the excess heat available when the maximum load is not required to produces up to 65kWe.

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**28 Nov** - [heating bills for Denmark's 1.6 million DH customers to rise](#) – the main cause of the increase is a “security of supply tax” on, among other things, wood chips and straw, which the government introduced in connection with last year's green energy agreement.

**27 Nov** - [EBRD invite Expressions of Interest for DH revamp \(Sophia, Bulgaria\)](#) – the upgrade will be financed from the Kozloduy nuclear Decommissioning Support Fund.

**22 Nov** – [Heat pumps on "Smart DH" in Denmark presentation](#) – DH can cut down the use of fossil fuels by using solar thermal, heat stores and heat pumps.

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## The Americas

**10 Dec** - [Duluth seeks to modernise coal-fired steam DH system \(Minnesota\)](#) – the system which dates from 1932 and serves over 180 commercial buildings, is the subject of a consultant's report which recommends adding sawdust as a fuel source and converting steam lines into a more efficient, closed-loop hot water system.

**10 Dec** - [District Energy Magazine - 2014 Editorial Calendar](#) – the editorial calendar is provided as a guide to upcoming topics scheduled for publication, but is subject to change.

**9 Dec** - [Groundwork begins for new DHC grid in Guelph \(Ontario\)](#) – the project is led by Envida Community Energy, a City of Guelph owned company, and is part of a long-term strategy to have the entire city connected to DE by 2041.

**5 Dec** - [Veolia plan 2.1km DH extension from power station \(Boston\)](#) – the revamped 256MW Kendall CHP natural gas plant will deliver heat via a 2.1km steam pipeline extension to customers in Boston and Cambridge reducing GHG emissions by approximately 475,000 tons per year.

**5 Dec** - [White House releases Presidential Memorandum on energy management](#) – the memorandum establishes new goals for renewable energy as well as new energy-management practices.

**5 Dec** - [NRG Yield to acquire ESC \(Omaha\)](#) – the Omaha system is known as one of the premier assets in the U.S. DE industry and has been recognized as a "System of the Year" by the International District Energy Association (IDEA).

**1 Dec** - [Use of waste heat positive for BPU \(Jamestown, NY\)](#) – the goal for 2014 is that a new heat exchanger will allow 60% of DH hot water to be derived from the gas turbine.

**25 Nov** - [New report recommends hot water biomass DE \(Nelson, BC\)](#) – the system would offer local energy independence, lower greenhouse gas emissions, lower building energy costs, and utilization of the abundant local renewable energy sources.

**22 Nov** – [Award for DE system and planned organic biofuel facility \(Surrey, BC\)](#) – the QUEST Community Energy Builder Award is for core DE development and a planned biofuel facility for processing organic waste into renewable natural gas.

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## China, Asia and Australasia

**12 Dec** – [new shopping mall to benefit from DC \(Cebu, Philippines\)](#) – sustainable components of the expansion include green roof, DC, use of natural lighting through clerestories and use of energy-efficient lighting fixtures.

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**10 Dec** – [Moody's Investors Service endorse Korea DH Corporation](#) –KDHC is a majority state-owned provider of heating services to urban areas in Korea supplying DH to around 1.2 million households and 1,900 commercial buildings as of September 2013.

**8 Dec** – [Qatar Cool wins 'Best District Cooling utility provider' award](#) – the announcement was made at the Climate Control Awards 2013, held recently in Dubai.

**2 Dec** – [Sydney City Council close to adopting decentralised energy plan](#) – the Environment Committee has recommended that the final version of the Decentralised Energy Master Plan with amendments be adopted by the City Council.

**28 Nov** - [Kuwait to use DC in new build areas](#) - Kuwait's Ministry of Water and Electricity is planning to use DC for areas such as Khairan city and future planned towns.

**28 Nov** - [5th Annual Middle East DC Summit closes on a high note](#) - the summit has made governments more aware of the significance of DC in curbing power demand increases and its positive impact on the environment and national resources.

**27 Nov** - [JV company Saadiyat Cooling completes its first DC plant \(Abu Dhabi\)](#) - the plant has an installed capacity of 10,000RT, expandable to 12,500 RT when new developments such as Cranleigh school campus is connected.

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## Conferences and workshops

**17 Sept** – [Energy4PowerLive \(Silverstone, Northamptonshire\)](#) – this event offers four conferences on one day, with both indoor and outdoor exhibition opportunities.

**8-11 June** – [IDEA's 105th Annual Conference and Trade Show \(Seattle, US\)](#) – “Moving Community Energy Forward” call for technical presentations.

**3-4 June** – [The second solar DH conference \(Hamburg, Germany\)](#) – the 2014 edition of the solar DH conference invites market actors and experts to gather, exchange experience and network at international level.

**8-9 April** – [3rd Concentrated Solar Power Conference & Expo \(Cape Town\)](#) – reducing CSP costs & risk through international experience and investor insight.

**11-13 March 2014** –[International Bioenergy Conference 2014](#) – the event will cover the entire bioenergy chain and bring together speakers and delegates from the industrial, academic and policy communities..

**5-7 March 2014** –[10<sup>th</sup> South-East European Exhibition on Energy Efficiency and Renewable Energy](#) – this exhibition and conference will take place in Sofia, Bulgaria. A highlight in the Conference will be the session ‘Rethinking District Heating and Cooling in Europe’, organized by Euroheat & Power.

**26 Feb 2014** – [CoRE Social Housing: DH Schemes – Worth Considering? \(UK\)](#) – DH schemes have become a more viable option for social housing due to new, more efficient technologies and improved funding streams.

**18-21 Feb** – [IDEA's 27th Annual Campus Energy Conference \(Atlanta, US\)](#) – “Clean, Efficient & Resilient Energy” – the organisers are calling for technical presentations.

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## General interest, technology and research

**17 Dec** - [Grass as the new biofuel](#) - a new European research project looks to grass crops which could be grown and harvested on marginal lands not suitable for food crops.

**12 Dec** - [Making the business case for energy efficiency](#) – this US study found that all the utilities examined performed well financially and that no evidence was found to suggest that energy efficiency programs have had negative effects on shareholder returns.

**Dec** - [Design of decentralized solar DH systems \(France\)](#) - this case study identifies, through simulation, which solar heating solution was the most appropriate to achieve energy savings for space heating and domestic hot water production.

**Dec** - [updated DH Application Handbook available from Danfoss](#) - the handbook is a platform for sharing experience, expertise and getting the Danfoss recommendations on optimum performing DH applications and key applied control components.

**Dec** - [updated Hot Cool magazines available from DBDH](#) - the DBDH produces a variety of publications alone and in cooperation with other partners, e.g. the Danish Energy Agency. Our main asset is the English-language magazine Hot Cool.

**28 Nov** - [‘Innovative Cooling for Green Thinking’](#) - the presentation noted that architectural and landscape aspects of the solution are as important as the engineering approach and that solar radiation mitigation is the most important factor in minimising heat gain.

**27 Nov** - [Biomass CHP plant youtube presentation \(Linz, Austria\)](#) - 18% of all district heating to the third-largest city of Austria, Linz, is served by a biomass fired CHP plant.

**Nov** - [Near future challenges for R&D in the DHC sector](#) - this presentation by Dr Ingo Weidlich from Leibniz Universität identifies challenges for CHP-DHC in the context of the German energy system.

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## Glossary

AC – air conditioning

ACEEE – [American Council for an Energy-Efficient Economy](#)

AD – anaerobic digestion

ASHRAE – [ASHRAE](#) (Formerly the American Society of Heating, Refrigerating and Air Conditioning Engineers)

ASPs – [air source heat pumps](#)

CCHP – combined cooling, heating and power

CHP – combined heat and power

CRM – [Customer relationship management](#)

CSP – [Concentrated Solar Power](#)

CTF – [Clean Technology Fund](#)

DCLG – [Department for Communities and Local Government](#)

DECC – [Department for Energy and Climate Change](#)

- DE – district energy
- DH – district heating
- DHC – district heating and cooling
- DHN – district heating network
- EBRD – [European Bank for Reconstruction and Development](#)
- ECCC – [\(House of Commons\) Energy and Climate Change Committee](#)
- ECO – [Energy Company Obligation](#)
- EIB – [European Investment Bank](#)
- EPSRC – [Engineering and Physical Sciences Research Council](#)
- ESCo – [Energy Service Company](#)
- EfW – [Energy from waste](#)
- GCC – [Gulf Cooperation Council](#)
- GHG – greenhouse gas
- GSPs – [ground source heat pumps](#)
- H&S – health and safety
- HNDU – [Heat Networks Delivery Unit](#)
- I&C – information and control
- IBRD – [International Bank for Reconstruction and Development](#)
- IDEA – [International District Energy Association \(US\)](#)
- ITT – Invitation to Tender (European equivalent to RFP)
- JV – Joint Venture
- KDHC – [Korea District Heating Corporation](#)
- LEEF – [London Energy Efficiency Fund](#)
- PV – Photovoltaic
- Ofgem – [Office of Gas and Electricity Markets](#)
- ORC – [Organic Rankine cycle](#)
- OTEC – [Ocean Thermal Energy Conversion](#)
- QUEST – [Quality Urban Energy Systems of Tomorrow](#)
- RFP – Request for Participation (N. American equivalent to ITT)
- RHI – [Renewable Heat Incentive](#)
- RT – [Refrigeration Tonnes](#)
- SDC – [Seawater District Cooling](#)
- SUDS – [Sustainable urban drainage systems](#)
- TSB – [Technology Strategy Board](#)

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TSE – Treated Sewage Effluent

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