

District Energy Vanguards Network Newsletter

Table of Contents

Editorial	1
UK Policy	2
Open consultations and research funding	2
Reports and documents	2
UK News	2
Europe	3
The Americas	5
China, Asia and Australasia	5
Conferences and workshops	6
General interest, technology and research	6
Glossary	7

Editorial

Last week the District Heating Vanguard's Network hosted their fifth meeting which focused on the financing of local district energy projects. The event was full to capacity and commenced with a civic reception the preceding evening in Glasgow City Chambers, set against the backdrop of the Glasgow City Council's imminent decision on the selection of a business model to deliver a series of projects building towards a city-wide heat network.

Delegates from a range of backgrounds in the municipal, finance and academic sectors from across the UK and as far afield as Calgary, Alberta, heard from expert practitioners and debated the issues arising in intense round table sessions. Issues addressed from potential business models to sources of public and private finance. The presentations from the workshop have now been posted here: ["Next Steps in Financing District Energy"](#) and the workshop report should be available at the same link next Friday 6th December.

Attendees fed-back that they are finding these meetings increasingly valuable in addressing some of the complex issues that arise out of taking forward a major energy infrastructure project. Whilst all sides were keen to make progress it would seem that a gap still needs to be closed between public and private sector expectations of rates of return and the degree of control required to cover risk.

However, all agreed on the continued need for the Energy Company Obligation (ECO) as a significant funding source for the retrofit of DE projects in the existing housing stock. Indications were given that this could benefit thousands of homes and particular case

Produced in association with



studies were highlighted. However, the current tight administrative requirements of the programme militate against optimum deployment. Consequently DECC's recent proposal to drop the 6 month completion deadline is welcome. Furthermore, the 'background noise' emanating from the current political review of 'green levies' suggests that the term may be extended from 2 years to 4 years, which may be helpful to district heating in relation to the typically longer-lead times required in developing such projects.

The uncertainty created by the political review had cast a dark cloud on the district energy sector. However, in this case it may well have a silver lining.

Michael King, Editor

[back to top](#)

UK Policy

Open consultations and research funding

13 Nov – [Regulatory framework for Geothermal DH in Europe Consultation](#) – the Geothermal DH (GeoDH) consortium are inviting stakeholders to contribute towards a draft document. **The short consultation period closes on 30th Nov.**

Nov – [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 and documents

12 Nov – [People and place in social reform \(IPPR North report\)](#) – one of the recommendations is that local authorities and other housing bodies should explore and develop DH system proposals in targeted neighbourhoods, which should be supported by the Green Investment Bank.

7 Nov – [On-site energy generation to save UK business £33bn by 2030](#) – CHP and EfW are predicted to deliver the greatest savings (£20bn) but solar and tri-generation are expected to grow the fastest according to [the study by Utylix](#).

29 Oct – [transcript of Parliamentary Committee oral evidence on heat](#) – the House of Commons ECCC posed questions to experts on the subject of DH (starting at Q33).

[back to top](#)

UK News

22 Nov - [London's DH Renaissance](#) – 2013 has seen significant positive developments around the DE theme in London and also at the UK level.

20 Nov - [Code for Sustainable Homes and the Housing Standards Review](#) – the Environmental Audit Committee have published their Eighth Report together with the Proceedings of the Committee.

Produced in association with



- 18 Nov** - [developers should use higher standard EN 253 DH pipes](#) – by specifying pipes with thicker insulation thermal losses will be significantly reduced across the lifetime of the system.
- 15 Nov** - [Waste heat from the Tube to be used in DH scheme \(London\)](#) - the Bunhill network will be expanded to capture heat from a London Underground ventilation shaft and an electricity sub-station owned and operated by UK Power Networks.
- 14 Nov** - [Bunhill Heat and Power win Community Initiative award \(London\)](#) - the council-owned energy scheme provides heat to 700 Islington residents from a CHP plant. It will cut residents' heating bills by around a third and save a 1,600 tonnes of CO₂ a year.
- 13 Nov** - [How to get district heating right \(Casey Cole, blog\)](#) - when it's done right, DH is a cost-effective strategy for delivering low carbon heat.
- 12 Nov** - [Carbon Trust urges take-up of HNDU funding](#) – the Carbon Trust calls on local authorities to take advantage of government funding for heat networks.
- 8 Nov** - [DH and nuclear power \(Robert Sansom, blog\)](#) – following on from the announcement on Hinckley, the author suggests that CHP- DH can work well with nuclear.
- 8 Nov** - [LEEF announces a Green Loan facility to City Livery Company \(London\)](#) – the loan facility will support the connection of buildings to the Citigen district energy network.
- 4 Nov** – [concerns on overheating prompt GLA to fund study \(London\)](#) – the study will examine how communal heating systems can be designed to avoid overheating.
- 4 Nov** – [geothermal drilling project and associated DH lease tender \(Crewe\)](#) – the Council is intending to hold an open day for interested parties that will provide an opportunity for potential bidders to be provided with further information in respect of the project.
- 3 Nov** – [First UK community heating scheme powered by energy from river water](#) – the Mitsubishi Electric Ecodan water source heat- pump based system provides energy for the heating and hot water for a new £70m development in Kingston.
- 3 Nov** – [Devon farmer opts for biomass boiler and DH](#) – consistency of heat supply and the absence of major planning or electricity grid issues and were strong drivers for the system.
- 28 Oct** – [Company and institution leaders urge retention of ECO scheme](#) – the letter argues that energy efficiency is the “only sure way” to protect households against rising bills in the long-term, and that rolling back ECO, would instead increase energy bills for these consumers and have “severe consequences” for jobs in the sector.

[back to top](#)

Europe

- 20 Nov** - [European Commission issue heating and cooling guidance](#) – the objective of Article 14 is to encourage the identification of cost effective potential for delivering energy efficiency, principally through the use of CHP, efficient DHC and the recovery of industrial waste heat.
- 20 Nov** - [Tieto to provide CRM system for Finnish energy company](#) – the solution will enable Suur-Savon Sähkö to manage entire customer relationship lifecycles related to electricity sales, DH and network operations.

Produced in association with



- 19 Nov** - [Centrax wins DH plant orders in Russia](#) – the UK power-generation packaging specialist has sold two 5.2MW gas turbine sets for DH plants in Moscow and Kirov.
- 14 Nov** - [Focus on energy security powers European CHP for DH market](#) - new analysis from Frost & Sullivan finds that the market earned revenues of €482.5 million in 2012 and estimates this to grow to €1,025.3 million in 2019.
- 12 Nov** – [Futuristic tennis clubhouse to use DH \(Amsterdam\)](#) – the clubhouse will use a heat exchanger coupled to the DH system.
- 12 Nov** – [Biogas production boosted at Munich waste water plant](#) – the Rotork Schischek ExMax explosion proof actuators have been selected to assist the production of biogas derived from effluent treatment process for use in DH systems.
- 11 Nov** - [Pellet consumption in Denmark projected to grow](#) - the Danish government report cites Denmark as the largest importer of wood pellets in the world. The pellets are used to fuel small residential boilers, medium-sized DH plants, and large CHP plants.
- 11 Nov** - [Dalkia Energia opens biomass CHP plant \(Pécs, Hungary\)](#) - the €80.8m plant has a 35MWe and 70MWh capacity, providing 60% of the heat for 31,000 flats and 450 institutions.
- 11 Nov** – [the People’s Charter on renewable energy](#) – the charter calls for greater community involvement in Ireland’s energy problems including an emphasis on DE.
- 11 Nov** – [Siemens to build turnkey CHP plant \(Gorzów Wielkopolski, Poland\)](#) – the 138MWe/ 90MWh plant will replace a coal-fired plant at the same location. It will be fired with local nitrogen-rich natural gas and linked into the town’s DH system.
- 8 Nov** - [Stokvis Energy Systems launch new H-Series Econoplate interface units](#) – the one and two plate units are a response to the increasing popularity of communal and DH systems for apartments, student flats and sheltered housing schemes.
- 7 Nov** - [Veolia expected to take over Dalkia](#) - energy services will become a core business at French water and waste group Veolia Environnement after it takes over the international activities of its Dalkia joint venture with France's state-controlled utility EDF.
- 7 Nov** - [Telekom Austria Group M2M launches a smart metering platform](#) – the new solution “SMARTify” supports different metering suppliers and can also be applied to gas, DH and water .
- 5 Nov** - [Fortum to sell its share in DH company \(Riihimäki, Finland\)](#) - the transaction is part of Fortum’s efficiency programme which consists of focusing on CHP production and on distribution and sales of district heat in larger centres and units.
- 4 Nov** - [Powerful supercomputer uses DC to stay cool \(Linköping, Sweden\)](#) - the Triolith supercomputer consumes 510kW and uses DC in summer run on waste heat.
- 4 Nov** - [Waste-to-Energy association urge stronger implementation of legislation \(France\)](#) – if fully implemented, existing EU waste legislation could be used to divert waste from landfills to recycling and waste-to-energy, treating the remaining part not suitable for recycling by generating heat for DE systems.
- 4 Nov** - [Tender issued for DH rehabilitation \(Rijeka, Croatia\)](#) - the proposed project will heat the University Campus, the City General Hospital (includes cooling) and a residential area. It is being financed by an EBRD loan with an estimated cost of €10.3m equivalent.

Produced in association with



4 Nov - [German not-for-profit public energy utilities provide successful model](#) - Stadtwerke München is a limited company wholly owned by the City of Munich which supplies gas, electricity, DHC, water and leisure facilities as well as the public transport network.

4 Nov - [Turkey's Prime Minister visits Fortum and CHP plant \(Stockholm\)](#) - wave power, hydro power, waste to energy and solar power were also showcased during the visit.

3 Nov - [Dutch waste-to-energy firm wins Global DE Climate Award 2013](#) – in 2011 pipelines were completed to enable the supply of waste heat to a salt plant thereby reducing natural gas consumption by 125million cubic meters in 2011 and 2012.

1 Nov - [EBRD provides €12.9m funding package for DH company \(Russia\)](#) – the package will facilitate the CCS group's plans to expand its operations among Russia's smaller municipalities and finance the modernisation of inefficient DH systems.

30 Oct - [DH company install fuel cell micro-CHP \(Homburg, Germany\)](#) – the domestic scale fuel cell CHP will complement community scale DH systems.

[back to top](#)

The Americas

20 Nov - [Municipality may host \\$7.5m DE sewage heat system \(BC, Canada\)](#) – the system would supply heat to Esquimalt's town core, the Department of National Defence property and Victoria.

14 Nov - [Industry association releases communities energy guidebook](#) – IDEA announces Canadian counterpart of publication supporting community energy planning initiatives.

14 Nov - [Stanford University selects heat recovery pumps](#) - the DH facility will help the campus to reduce carbon emissions by up to 50% and save an estimated \$300m over the next 35 years.

13 Nov - [Finalists for 2013 Community Energy Builder awards announced \(Canada\)](#) - the awards were presented at the annual QUEST 2013 Gala Dinner and Awards Ceremony.

7 Nov - [\\$32m of grants for renewable heating, cooling projects \(Massachusetts\)](#) - the grants will help to fund biomass, heat pumps, solar hot water, CHP, DH and DC projects.

6 Nov - [Biomass DH half the cost of natural gas \(Alberta\)](#) - the system also reduces GHG emissions by 1,200 tonnes per year compared to the natural gas system it was added to.

4 Nov - [Markham city identifies priorities for gas tax windfall \(Toronto\)](#) - up to \$4 million will go toward Markham District Energy investments, including connecting and providing energy and heat to about 5.5 million square feet of space in the downtown area.

30 Oct – [Biomass DH project over budget by \\$3m \(Montpelier, Vermont\)](#) – inadequate preliminary design documents and unforeseen complications have plagued the project.

[back to top](#)

China, Asia and Australasia

24 Nov - [Singapore hosts one of the world's largest DC plant by capacity](#) - chilled water is one of several utilities continuously pumped through a network of common services tunnels at the rate of 600 tonnes per hour.

Produced in association with



19 Nov - [Empower signs DC deal with Al Habtoor City group \(Dubai\)](#) – the deal will require 17,500 RT of district cooling to be supplied to the \$3bn mixed-use Al Habtoor City project.

18 Nov - [interview with Empower CEO on prospects for DC \(UAE\)](#) - Ahmad Bin Shafar points out that developers love DC as it drastically reduces building maintenance cost and the government finds DC very favourable because it reduces electricity demand.

13 Nov - [Dubai Water & Electricity Authority expected to buy DC company](#) - Palm Utilities is the DC company for the Palm Island and other developments linked to Dubai World.

6 Nov - [UK firm wins contract to manage construction of world's tallest building](#) – the Kingdom Tower project in Jeddah, Saudi Arabia, will be cooled using DC.

4 Nov - [Tabreed company statement indicates net profit increase of 21%](#) – Abu Dhabi's National Central Cooling Company (Tabreed) has 66 plants with a capacity of 829,403 RT across the GCC.

4 Nov - [Tower Tech cooling tower technology wins DC award](#) – the award ceremony marked the climax of the seventh edition of the Climate Control Conference held in Doha.

[back to top](#)

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.

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 – [10th South-East European Exhibition on Energy Efficiency and Renewable Energy](#) – this exhibition and conference will take place in Sofia, Bulgaria.

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.

2-4 Dec – [DH Roadshow \(Shandong, China\)](#) – this event is sponsored by the Swedish Government to promote penetration of Swedish companies into the rapidly growing DHC market in China.

[back to top](#)

General interest, technology and research

20 Nov - [ASHRAE publication provides design guidance on DC systems](#) - the newly published book includes guidance on central chiller plants, chilled-water distribution systems and consumer interconnection.

Produced in association with



19 Nov - [Best available technologies for the heat and cooling market in the EU](#) - this study on the European heat and cooling market covers DH and DC and thermal solar heating technologies, their investment and running costs and efficiencies.

19 Nov - [IDEA publishes 4th Quarter Magazine "District Energy"](#) - this periodical is free and includes a wide range of articles covering the DHC scene in North America.

12 Nov - [Cranfield University and Global CSP announce collaboration](#) - the innovative ORC (Organic Rankine Cycle) technology can to be used with low-cost, small-to medium scale solar thermal power units which could power DH systems.

12 Nov - [DH substation DSA 1 MIDI video installation guide](#) - the guide gives an overview of how the station is installed and tips and tricks for maintenance.

4 Nov - [Falling costs and prices fuel private investor interest in fuel cells](#) – other attractions of fuel cells include improving efficiency, compactness, low environmental footprint and suitability for CHP.

1 Nov - [Researchers propose heat extraction from underground aquifers in cities](#) – the Swiss based researchers have developed an analytical heat flux model which demonstrates that increasing heat in groundwater aquifers could be used for heating in winter and cooling in summer.

[back to top](#)

Glossary

AC – air conditioning

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

AD – anaerobic digestion

ASHRAE – [ASHRAE](#)

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](#)

Produced in association with



- 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)
- 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](#)
- TSE – Treated Sewage Effluent

[back to top](#)

Produced in association with

