



## HOTSPOT TECHNOLOGY SESSION

# DISTRICT HEATING PIPE NETWORKS

### SUSTAINABLE DESIGN, TECHNOLOGIES AND INSTALLATION PRACTICES

**YOU ARE INVITED** TO A HOTSPOT STOKE TECHNOLOGY SESSION FOCUSING ON NETWORK DESIGN, TECHNOLOGIES, INSTALLATION PRACTICES AND MAINTENANCE SOLUTIONS MINIMIZING TOTAL COST OF OWNERSHIP WHILE MAXIMIZING THE OPERATIONAL LIFE SPAN OF THE SYSTEM

**Stoke - 28 June - 2016**

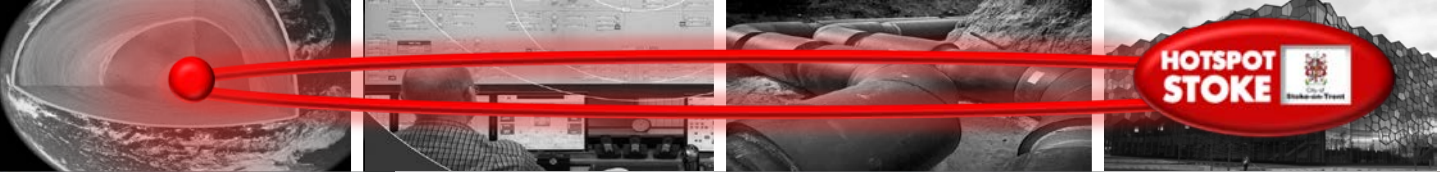
**THE PIPE NETWORK** constitute the core of a district energy system. It represents the very foundation of a district heating solution being the physical and yet invisible artery and enabler of the DH business model. The pipes represent the only thing that cannot be replaced. The sources of heat may vary over time, as will most certainly the heat interface units and metering solutions, just to mention a few of the components required to form a DHN system.

THE PIPE NETWORK also represents the most significant part of the investment. Procuring and installing pipes is very expensive. No other component is even near the cost of establishing an extensive pipe network providing the heat to all end-users. The CAPEX related to the pipe network constitute the do or die of a DH investment. Considering this it is tempting to select the lowest cost solution available, both with regards to the hardware, installation method and surveillance solution. However, as has been experienced by a long list of energy operators in Scandinavia - thinking short term when it comes to pipes can be very, very expensive in the long run.

Pipes may be expensive, but installing them is way more costly, The ratio is often 1:5, but in very dense urban areas it may well be much higher. And above the financial cost there are other costs and risks related to the actual installation. The trenching required, although temporary, creates heavy disturbances in cities which in turn may create a negative perception of district heating as well as political goodwill costs. Once in the ground, you don't want to start digging again in order to repair a minor leak or some other malfunction. Not next year, and not even in 20 years time. Energy operators in Scandinavia are becoming increasingly aware of the concepts of sustainable procurement and total cost of ownership. They have in many cases learned this the hard way, and it has been a highly expensive lesson. The true professionals in the industry are currently designing their networks to last well beyond 50 years, up to 100 years. And if required when selecting technologies and installation practices, they are ready to increase the upfront Capex to achieve this. And to take the costs required for surveillance and maintenance. They know it pays off in the long run to employ the best available technologies and competences when installing heat networks.

There is however also another consideration to take into account - OPEX. When extending the expected life span of a heat network, you also want to make sure that you keep the operating costs down. It is therefore essential to select technologies that minimize the heat losses, also in an aging system. All in all, installing heat networks boils down to a balancing act between Capex, Opex and Total Cost of Ownership.

**At the up-coming technology session in Stoke-on-Trent we will address these issues in detail.  
WELCOME TO HOTSPOT STOKE ON 28 JUNE.**



## REGISTRATION & PRACTICAL INFORMATION

### AUDIENCE

District Heating Project teams from public and private sector  
 Public Institutions  
 Consultants and Suppliers of technologies and Services  
 Contractors  
 Investors

### DATES & LOCATIONS

**28 June, 09.30-16.00**  
**Hotspot Stoke**  
**Smithfield Building**  
**Stoke-on-Trent**



### FEE

Public stakeholders - No fee  
 Private companies - please contact organizers to obtain fee structure

### QUESTIONS & REGISTRATION

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## AGENDA

- |               |   |
|---------------|---|
| 09.30 - 12.00 | Joint session focusing <ul style="list-style-type: none"> <li>- Presentation of projects</li> <li>- Design</li> <li>- Pipe Technologies</li> <li>- HIUs and their impact on dimensioning of pipe systems</li> <li>- Installation practices</li> <li>- Surveillance systems</li> <li>- Maintenance and Repair</li> <li>- Experiences from Scandinavia</li> </ul> |
| 12.00 - 12.30 | Lunch   |
| 12.30 - 17.00 | Individual Sessions <ul style="list-style-type: none"> <li>- Circling meetings involving project teams and technology/ service suppliers</li> </ul>   |

## PARTICIPANTS

### DHN PROJECT TEAMS

Stoke-on-Trent	Sebastien Danneels Andrew Briggs
Bristol	<i>(still to be confirmed)</i>
Haringey	<i>(still to be confirmed)</i>
Öresundskraft	Lars-Inge Persson
Other project teams <i>(to be confirmed which)</i>	

### TECHNOLOGY & SERVICE PROVIDERS

*Technology Consultants*

*Technology suppliers - e.g. Pipes, HIUs*

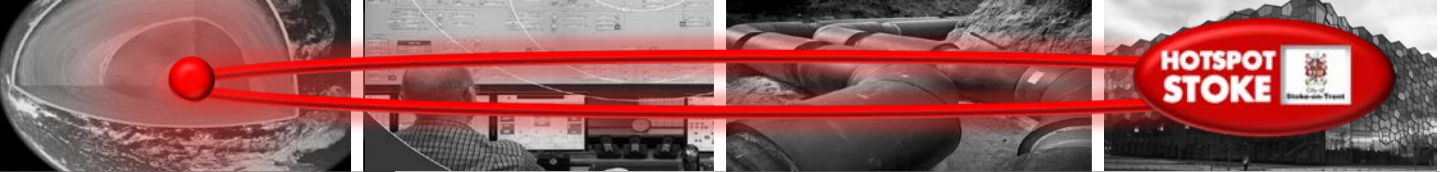
*Contractors*

*Leak detection providers*

*Service and Maintenance providers*

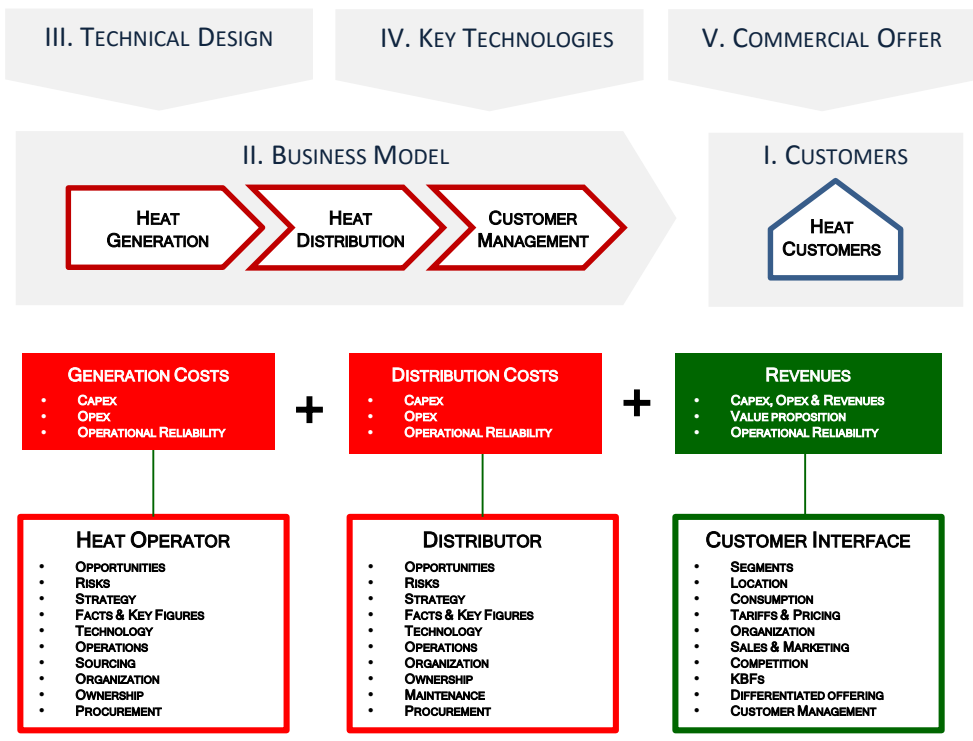
## ORGANIZERS





## OBJECTIVE

The overall theme of the session will be to highlight best available practices and technologies to make district heating competitive. The objective is to present solutions and opportunities to optimize Capex and Opex, while maximizing the performance and technical lifespan of the system.



Participating consultants, technology and service suppliers and consultants will present alternative solutions and strategies to reduce the Capex and Opex of district heating systems, while maximizing the operational performance and the technical lifespan of installations.

The aim is also to have an action oriented and practical approach. The objective is not just to theoretically describe challenges and opportunities. Beyond that we also want relate it to the current projects of participating companies. **Participating DH project teams are therefore asked to prepare a short presentation on the specific projects they are currently working on - scope, objectives, time frame, specific challenges, and examples on prioritized issues and questions they would like to raise at the joint session.**

During the morning session we will mix presentation by consultants, technology and service suppliers and contractors, with discussions on issues raised by participating DH project teams. The ambition is to make the workshop as interactive as possible.

In the afternoon we will organize rotating meetings between DH project teams and suppliers.



# THE HOTSPOT INITIATIVE

## BUSINESS & COMPETENCE CENTERS IN DISTRICT ENERGY

### BACKGROUND

- DISTRICT ENERGY (DE) is about to become a major new industry sector in Europe. The expansion of DE will not only offer benefits in the areas of energy supply and environmental protection, it will also open up opportunities for profitable investments and job creation. The expected growth in district energy is thus attracting not only energy operators but also politicians, investors and suppliers of technologies and competencies from Europe and beyond.
- The current overall market share within EU27 is expected to more than double from its current 8% to close to 20% in the next decade.
- Visions are defined and objectives fixed from EU level down to local city councils. However, it has proven to be a major challenge to bring projects beyond feasibility studies and into installation and operations.
- One key issue slowing down the process is the fact that district energy is a multi stakeholder activity. There is a strong need to bring together and co-ordinate the activities of all actors aiming to enter the new markets.

### OBJECTIVES

- The overall aim is to establish a network of district energy hubs in key markets across Europe, and beyond.
- The HOTSPOT hubs are intended to serve as stepping stones into the DE sector facilitating business development, investments, innovation and training.
- The underlying ambition of the HOTSPOT hubs is to attract a critical mass of actors to one spot, thereby creating a dynamic context facilitating exchange and co-operation and generating the gravity required to attract yet further actors. The assumption is that this will increase the effect of the combined initiatives and investments in the sector thereby speeding up the development of DE in Europe.
- The HOTSPOTS focus on four core areas of activity
  - BUSINESS SUPPORT
  - INNOVATION
  - TRAINING
  - INTERNATIONAL CO-OPERATION
- Being initially launched in 5 markets - UK, Sweden, Italy, Belgium, and Poland - the aim is to multiply the number of HOTSPOTS establishing a tightly-knit network across Europe and beyond.



# HEATNET

## MARKET MAKERS IN DISTRICT ENERGY

**There are new opportunities awaiting you beyond the horizon. Let HEATNET bring you there.**

The heat is on in the District Energy sector world wide. Having proven its case in Scandinavia - commercially, financially and environmentally - the heating solution is now attracting interest from a broad range of stakeholders across Europe and beyond. W2E and District Energy are no longer theoretical concepts being studied and advocated by politicians, energy experts and environmentalists. Pipe systems are installed, and sub-stations connected. Experiences are being accumulated. And they are positive. Energy customers, politicians, operators, investors, media, environmentalists all agree. District Energy is here to stay. And to grow. Driven by end user convenience, political demands for energy efficiency and security, public concerns for the environment, and unexplored commercial opportunities.


**There is No Time to Waste** for those who want to establish a position in the emerging District Energy market. Now is the time. To enter the market, to network and identify the right people. To understand the demand and adjust your offering. To secure the first order, and the next. To establish a local team and to expand. **Let us take you beyond the horizon in District Energy.**

- **WHAT** is the market - volumes, driving forces, trends?
- **WHERE** is the market - countries, sectors, segments?
- **WHO** is the market - key stakeholders to connect with?
- **HOW** to serve the market - what to offer to match the need?
- **WHOM** create the market with - potential partners?




**HEATNET** is a pan-European support company offering a range of Market Maker services on short notice to managers and teams in the European District Energy and Waste to Energy markets. The 250 professionals who are partners in the HEATNET network spread across more than 20 countries are all highly experienced and well connected. Most have more than 25 years of operational experience in the energy sector.





district energy partners – europe  
www.heatnet.se | making your market



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**HEATNET OFFERS A WIDE RANGE OF MARKET MAKER SERVICES TO THE DISTRICT ENERGY SECTOR THROUGH OWN STAFF AND ITS EXTENSIVE NETWORK OF HIGHLY EXPERIENCED PARTNERS ACROSS EUROPE**



**250 PARTNERS | 20 MARKETS**

- SALES SUPPORT SERVICES - **HOTSPOT** BUSINESS CENTRES
- NETWORKING & MATCH MAKING SERVICES
- INVESTOR ADVISORY SERVICES
- WORKSHOPS & STUDY VISITS
- MARKET RESEARCH & NEWS SERVICE
- SEARCH, RECRUITMENT AND POOLING
- MASTER CLASS SESSIONS & TRAINING
- SCREENING & DUE DILIGENCE SERVICES
- SUPPORTING INNOVATION IN TECHNOLOGY & PRACTICES - E.G. **BEYOND THE HORIZON** & **DIGITAL HEATING**