THE SMART CITY ALLIANCE

Execution is Everything

INVITATION

SMART CITY INITIATIVE – HEATING AND COOLING

MINE HEAT
TERRACED HOUSING HEAT CONNECTIONS
URBAN FARMING

DEVELOPING COST EFFICIENT AND SCALABLE SOLUTIONS

NEWCASTLE
1ST AND 2ND OCTOBER - 2019

The Heating and Cooling Smart City Initiative aims to accelerate the regeneration of former mining and industrial areas of the North East by transforming their energy and food supply using sustainable and affordable solutions. You are invited to a two-day seminar at which we will highlight a selection of major opportunities, as well as the strategies and technologies available to explore them in real life.

MINE HEAT

Aim - to offer affordable and sustainable heat from mines to residents on the surface. Heat from former mine workings has the potential to replace gas as the main heat source in many areas of the North East. A series of mine heat projects are underway and many more are planned. Delegates will learn about these opportunities from public, private and academic partners.

TERRACED HOUSING

Aim - to offer convenient and affordable district heating to small scale residential housing areas. Connecting terraced housing to heat networks is one of the outstanding challenges and opportunities facing local councils and suppliers. We have a dynamic line up of experienced practitioners who will show you how they are tackling this issue and creating innovative solutions.

URBAN FARMING

Aim - to show how urban agriculture can provide local, nutritious and healthy food and also boost the performance of heat networks. The Netherlands has long understood the economic and health benefits of producing fresh food in glass houses close to population centers. We will explore how this is achieved and how heat networks can provide benefits both to growers and network operators.

BACKGROUND

MINE HEAT

Old mines are currently regarded as a liability, requiring significant resources for management and maintenance. However, connecting mines to heat networks turns them into sustainable low-cost revenue generating assets. Mines can also become a cross seasonal heating and cooling storage facility.

It is estimated that the heat available in mines could more than meet the total demand of heating in the UK. There are limits to how far the heat can be distributed; however, mines have the potential to evolve into a billion £ industry, replacing gas as the main heat source in large parts of the UK. This in turn would make mines a significant contributor in reducing carbon emissions.

Mine Heat will become a major commercial opportunity to the supply chain of technologies and services. However, there is a need for a close co-operation between the different stakeholders to identify and develop the most cost-efficient solutions enabling implementation on a large scale.

TERRACED HOUSING

Terraced houses represent a significant share of the heat market in the UK. Currently available technologies and practices for connecting heat networks to individual houses are too costly to make district heating a viable alternative to existing gas-based solutions. Not being able to connect terraced houses to heat networks is a huge handicap, significantly hampering the expansion of district heating. We believe there are ways to overcome the cost challenges, thereby making it possible to connect terraced housing to heat networks on a big scale. Combined with heat pumps and smart technologies for managing the heat distribution we also believe it is likely to become commercially viable to connect terraced houses to other innovative infrastructure projects such as mine heat schemes or other sources of low temperature heat.

URBAN FARMING

As populations continue to rise, local food production becomes all the more important for food security. By using surplus resources such as residual heat from heat networks, waste CO_2 from industrial processes and other urban waste streams, the commercial case for urban agriculture schemes becomes strong.

Many heat networks in the UK are not optimally efficient because the circulating heat is not fully used before it is replenished. By adding heat loads from glass houses to the return line of heat networks, more heat is consumed which improves the network's efficiency. CO_2 recovered from industrial processes and injected into the glass houses for the plants to consume is another effective re-use of waste to improve plant growth while composted urban organic waste provides low cost high value growing mediums.

Urban agriculture also offers great opportunities for citizens, community groups and commercial organisations to work alongside each other to create successful projects that improve the quality of food, help tackle poverty, enhance social inclusion and encourage well-being.

SPEAKERS INCLUDE

- Jonathan Mullard – BEIS – Local Energy Manager
- Charlotte Adams –Durham Energy Institute - Director of CeREES
- Andrew Clarke – North East LEP – Progamme Lead - Energy Sector
- Lee Wyatt – The Coal Authority - Hydrogeologist
- Peter Styles – Keele University – Emeritus Professor
- Jim Gillon – Gateshead Council – Energy Services Manager
- Faye Tomson – District Eating
- Gabriel Gallagher – Sustainable Energy
- David Kilduff – Walker Morris - Partner
- Steve Hayes – Hayes Tec - CEO
- Peter Anderberg – Nordic Heat
- Mark Woodward – The Smart City Alliance

VENUE

The Copthorne Hotel, The Close, Quayside, Newcastle NE1 3RT

A number of rooms have been reserved on a first come first served basis

ORGANISED BY

THE SMART CITY ALLIANCE
Eco-governance in Practice

IN COOPERATION WITH

The Coal Authority

Teknikföretagen

IN ASSOCIATION WITH
Swedish Agency for Economic and Regional Growth

Nordic Solutions for C40

NORDIC HEAT

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FEES

- Free of charge for local authorities and public stake holders
- £300 (excl. VAT) for local suppliers (max 2 participants per company)
- £650 (excl. VAT) for national & international suppliers (max 2 participants per company)

REGISTRATIONS

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VENUE

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