CELIUS Workshop cohosted with Métropole de Lyon – DHC Days 2017: Local to Global Approaches for Innovative District Energy Solutions

Collaborators of the event: SweHeat and Cooling (who expanded the CELIUS network by inviting the sponsors), DHC News, UN Environment District Energy in Cities Initiative, and Amorce.

Sponsors of the event: Alfa Laval, Mittel, HWQ Group, If...Insurance, Regin, PassivSystems, Siemens, SavoSolar, Energy Opticon and SWEP.

Documentation from the workshop

The presentations from the workshop are now available on the CELIUS wiki. CELIUS Member Cities and CELIUS City Supporters have access to the CELIUS network, including the CELIUS wiki. Contact us if you would like to join the network or learn more about CELIUS.

Read the CELIUS newsletter reporting from the workshop.

Agenda

Day 1: Tuesday, February 21, 2017

Venue: Métropole de Lyon Headquarters, 20 Rue du Lac, Lyon, France
Moderator: Emilia Pisu Castañeda, Project Officer, CELIUS, Göteborg Energi AB

8.30 Registration and welcome coffee

9.00 Welcome address
Katrina Folland, CELIUS Project Coordinator, City of Gothenburg
Celia Martinez, Technical Expert, District Energy in Cities Initiative, United Nations Environmental Program
Samia Belaziz, VP for District Heating and Cooling, Lyon Métropole

District energy in France
National challenges for DHC: what is at stake?, Nicolas Garnier, Director, Amorce
Promoting district energy development, David Canal, Head of District Heating, ADEME

10.00 Urban Waste Heat Recovery: residual heat at your doorstep
Moderator: Nicolas Garnier, Director, AMORCE
HOTMAPS

www.hotmaps-project.eu

Tools and recommendations for heating and cooling planning

Sara Fritz
DHC Days 2017 / 22.02.2017 / Lyon
HotMaps will develop, demonstrate and disseminate a toolbox to support public authorities, energy agencies and planners in strategic heating and cooling planning on local, regional and national levels, and in line with EU policies.
HotMaps Objectives

HotMaps Toolbox

- Default Data Set for EU-28
- Planning Guidelines and Scenarios
- Energy Systems Modeling
- IT Implementation and Visualization

Pillar 1

Pillar 2

Pillar 3

Target Group Interaction, Testing, Demonstration and Capacity Building
Overview

• Challenges in heating and cooling planning
• Selected Tools
• Recommendations
CHALLENGES IN ENERGY PLANNING AND HEAT ENERGY SYSTEM ANALYSIS
Dimension of energy planning

Toolbox

- Scopes and Aims
- User Stories
- Stakeholder
- Tool
- Result and scenario assessment
- Data availability
- Spatial Resolution

User Stories
SELECTED TOOLS
Heat density maps

- Spatial highly disaggregated heat densities considering the development of buildings heat demand due to efficiency measures in the building stock
- Basis for the analysis regarding the future heat energy system

Source:
- Austrian HeatMap: http://www.austrian-heatmap.gv.at/karte/
Central vs. Decentral heat supply

Potential District heating areas

Decentral heating options
District heating expansion planning

- Optimized district heating potential (building block level, 100 m x 100 m, regional, national)
- Analyse the interdependencies of long-term development of buildings' heat demand and district heating expansion

Source: Power-to-heat Potentials – P2H-Pot: www.eeg.tuwien.ac.at/P2H-Pot
Identification of economic viable district heating region (by the example of Vienna)

Customer perspective

Network operators‘ perspective

Source other projects:
Energy planning: Lessons learned in previous projects*

Strategic local and regional heat/cool planning
- Better geographic data availability (buildings, waste heat potentials, cooling demands and local RES resources)
- Long term environmental political targets (both at local and national level)
- Availability, time and competences to use DH/C planning tools at local level

*Source: H2020 Project progRESsHEAT
Heat energy system analysis: Lessons learned in previous projects*

Regulation
– Reduction / avoidance of double infrastructure (respectively DH and natural gas)
  • Mandatory connection in DH priority areas useful?

Economy
– Increased heat savings in DH areas must be matched by increased DH connection rate (or DH prices will increase)
– Aligned taxes, tariffs and subsidies (CO₂, fuels, electricity for HP and use of waste heat)

Source other projects:
• H2020 Project progRESsHEAT: http://www.progressheat.eu/Project.html
• URBEMDK: http://urbem.tuwien.ac.at/home/EN/
Thank you for your attention!

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