



# A Joint Research Agenda

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## EU quotations

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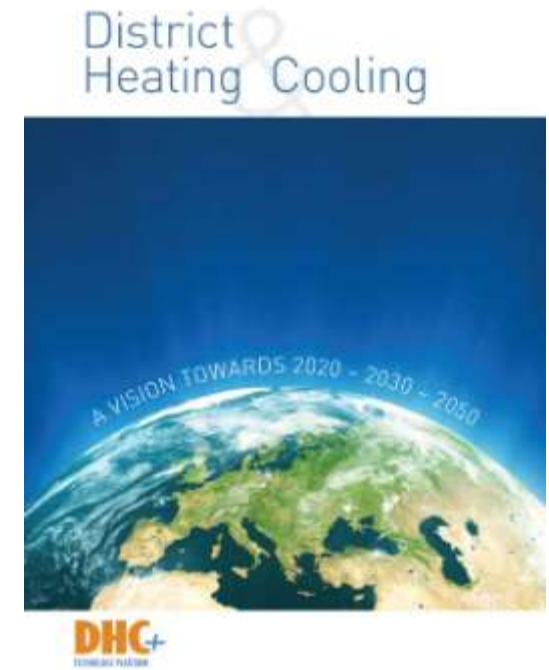


- “**Technology platforms** have the primary objective of defining a coherent and unified approach to tackling major economic, technological or societal challenges of vital importance for Europe’s future competitiveness and economic growth.”
- “they are proving to be powerful actors in the development of European research policy, in particular in orienting the *Seventh Research Framework Programme* to better meet the needs of industry.”
- “elaboration of a **Strategic Research Agenda** for the technology concerned is a central element of this process.”

# The strategic research agenda is ...

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- A document describing the main research items that the DHC sector should pursue to be able to attain the potentials put forward by the Vision
- compilation of research priorities with strategic relevance for the industry and Europe
- One of the central outputs from a technology platform: it's intellectual achievement
- Target groups: technology experts in policy circles, investors & DHC companies



# Why the need for a joint research agenda ? (I)

- To give prominence to DHC as a force for innovation
  - concerns the credibility of a sector in a time when energy is in limelight of attention and developments are speeding up
  - fulfill expectations: show oneself as credible ally; as partner for a sustainable transformation of European energy system
  - to speak about the sector: provide an insight into DHC possibilities and needs, more openness, increase accessibility & understanding of the technology

## Why the need for a joint research agenda ? (2)

- Align to European research programs and funding
  - document containing a coherent road-map for research and technological development : justification for project applications (*FP7, IEE, Structural funds, other national / European / international funding schemes*)
- Investors' & policy attention in favour of DHC
  - cumulative outcome of previous elements

## Why the need for a joint research agenda ? (3)

- Potential to act as reference document for DHC company strategies & opinion paper to be used in interaction with national policy circles / investors
- important that the agenda is representative, reflecting opinions of European DHC sector as a whole



## Example from practice

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- DHC+ Technology Platform participates in “Renewable Heating and Cooling European Technology Platform”: together with biomass, geothermal, solar and others.
- Cooperation meant to provide common topics for research priorities (i.e. aligning research agendas)
- Research priorities that derive from this work are taken up in the FP7 call for proposals of 2010 / 2011 (research + demonstration)
- Benefits: funding for research & demonstration projects, wider alliances, spread of knowledge about DHC technological possibilities, improved image

## Quotations on DHC: Solar thermal TP

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- “Within district heating systems, solar thermal energy can be produced on a large scale and with particularly low specific costs, even at high latitudes.”
- “these systems account for less than 0.5% of EU installed solar thermal capacity. However, their combined capacity is higher than that of 25,000 small solar domestic hot water systems.”
- Research areas (incl.): diurnal & seasonal storage, compact storage, absorption & adsorption cooling
- “2020: Solar delivers 1% of the total district heating”
- “2030: Solar delivers 10% of the total district heating  
Solar district cooling is included in 10% of solar district heating systems”





## Quotations on DHC: Geothermal SRA

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“For geothermal district heating, besides improved site assessment (...), further work is needed on re-injection into difficult aquifers (...). This is crucial for sustainable use of geothermal heat in countries like Hungary, Slovakia, Poland, Germany.”



EGEC – EUROPEAN GEOTHERMAL ENERGY COUNCIL

RESEARCH AGENDA FOR  
GEOTHERMAL ENERGY

Strategy 2008 to 2030

“(...) supporting work to get new plants closer to economic viability, in particular in adaptation of tools and methods of the hydrocarbon industry to geothermal energy, in innovative components (pumps, heat exchangers etc.), in the optimisation of networks.”

## Quotations on DHC:Wind TP

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- “Moreover, this market could contribute power production to the grid (storage solution). In countries with a large share of district heating, this network is suitable for the conversion of wind power to heat through heat pumps and electric boilers.

This can also be used for the heating of single family houses using electric heat pumps.”



## In conclusion:

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- At present substantial drive for promoting research & innovation in energy sector
- Crucial to achieve a prominent place in European research framework
- Outcome: ability to engage into more research & demonstration activities
- Prerequisite: identify and communicate research road map & join wider technological alliances





## Strategic Research Agenda for DHC: State of play

- Working Group Research Agenda first meeting in May 2009
- Structure for the Strategic Research Agenda, emphasis on:
  - Linking DHC potentials to EU priorities & providing further quantifications of what DHC can and wants to achieve
  - Describing main overall challenges for DHC
  - 10 thematic research dimensions with elaboration of the specific research needs



## Your contribution ?!

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- At an early stage of work. First plan is to gather as much input from experts as possible.
- Possible follow-up:
  - Questionnaires
  - Thematic working groups
  - Event
- Date of completion: end 2009 / beginning 2010



## Increasing efficiency and cost-effectiveness of modern systems

- Which steps are needed to lower costs of modern systems while faced with decreasing heat demands ?
- What developments are needed to lower costs and increase effectiveness of customer installations, materials, equipment & manufacturing techniques?



## New & improved synergies with strategic energy resources

- What improvements can be made regarding the integration of DHC energy sources and how ?
  
- What synergies with new energy sources can be achieved and what research does it require ?

## Modernization of old DH networks

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- Which elements need to be addressed when upgrading old DH networks and by which means should this be achieved ?



## Long-term customer confidence

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- Which measures are required to achieve greater satisfaction of customers connected to DHC systems throughout Europe ?



## DHC as intelligent heat exchange infrastructure

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- What research & development are required to achieve a DHC smart grid? (optimal interaction between energy decentral energy input and various temperature demands of customers)

## Expanding district cooling

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- What technological and regulative developments are needed to ensure the further expansion of district cooling systems in Europe ?

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## Contact DHC+ Technology Platform Secretariat

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