



## DISTRICT ENERGY CLIMATE SUMMIT

Copenhagen, November 3rd

### ***District Heating and Cooling: sustainable technologies for today and tomorrow***

*Energy is vital to the functioning of our societies. We need solutions that make it possible to combine sound economic growth with minimal environmental impact and maximum customer convenience.*

*District heating and cooling are key to sustainability.*

*District heating and cooling infrastructures enable huge carbon footprint reductions by creating the scale to allow cities to harvest the potential renewable energies and surplus heat that otherwise would be wasted, and thereby substituting cleaner, lower-carbon resources for fossil fuels.*

***Meeting for the first global District Energy summit on 3 November 2009 in Copenhagen, district heating and cooling operators, investors and users call upon all parties involved in the negotiations of a new climate deal at the 15<sup>th</sup> Conference of the Parties to take good note of a technology that is proven and reliable), convenient to use, and highly cost effective in combating climate change.***

***Not least the applicants for and winners of the first "District Energy Climate Award" from all parts of the world demonstrate the performance of district heating and cooling in mitigating climate change, exploiting synergies across different parts of the energy landscape and enhancing eco-efficiency through integration.***

*IEA studies as well as many other international and national studies show clearly: Heat demands dominate the end-use of energy. At the same time, large amounts of heat are being lost in energy transformation processes. These losses could be considered a resource and "recycled" provided the necessary infrastructures are put in place. To trigger the necessary investments in more district heating and cooling infrastructures, focused, consistent attention from local and national governments is indispensable.*

*Therefore, representative organizations of the district energy sector decided to join forces in leading the way to Copenhagen. The following set of recommendations is intended to guide decision-makers gathering at the COP-15 in their search for pragmatic and easy-to-implement solutions that combine economic and ecological benefits.*





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***We, the representative organizations of district heating and cooling in more than 40 countries across the World, met in Copenhagen on 3 November 2009.***

***We call upon the Conference of the Parties:***

***1. To pay more attention to heating and cooling markets, as well as to consistently monitor and explicitly address these by international agreements, cooperation mechanisms and national legislation.***

Heating and cooling markets offer tremendous near term opportunities to reduce the use of scarce and polluting fossil fuels. The unique opportunities for enhanced thermal energy markets need to be taken into account and addressed by specific policies for thermal energy. Together with the development of renewable energy, waste heat has to be seen as one of the greatest potential sources of sustainable energy to urgently reduce carbon emissions and cover future thermal energy demands.

As of today, international and national statistics do not provide a complete picture of heating and cooling markets. Yet, policy-making must be based on solid facts and figures. The IEA and national governments must ensure continuous and complete monitoring.

***2. To prioritise action in urban areas and foster the integration of urban functions (waste incineration, industrial production, transport, services, household demands etc.) by promoting systematic heating and cooling infrastructure planning.***

Given the growing density of populations, rising energy demand and distinct pollution challenges, measures targeting urban areas can be expected to have the biggest impact in terms of climate protection. District heating and cooling grids allow a systematically build up coverage of commercial, residential and service sector demands by low- and no-carbon technologies. Greater integration of energy conversion and electricity generation facilities with heat supply infrastructure would offer huge opportunities to save primary energy and cut emissions

Tailor-made infrastructure solutions are required to connect thermal demands to locally available surplus heat and renewable resources. To maximize local economic benefits, it is essential that public authorities get actively engaged in cost/benefit analysis and subsequent planning

***3. To acknowledge district heating and cooling as important tool for climate change mitigation and the importance of financing new heating and cooling networks as well as the upgrading of existing networks where appropriate.***

District heating and cooling systems are highly profitable from a national economy perspective. However, they are long term commitments while liberalised energy markets prioritise short term commitments with shorter payback periods. Moreover, emission trading mechanisms focus on energy production only and hence do not necessarily provide sufficient incentives to trigger



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heating infrastructure investments. Especially in markets where district heating and cooling have a low market share, the contribution and coordination with public bodies in securing financing is essential. Emissions trading, energy policies and regulations must properly consider thermal energy as a resource and not simply focus on electricity.

In many transition countries, especially in Central and Eastern Europe, the high market shares of district heating provide an excellent starting point for bringing higher efficiency and more renewables to the heating and cooling markets. Investing in system improvements, market stabilisation and customer satisfaction is paramount.

With the available amounts of waste heat, there is no shortage of heat for space heating, warm water preparation and low temperature industrial purposes. The problem of the heat market is neither a problem of technology, energy availability nor carbon content, but organization and investment.

#### ***4. To promote the integration of supply side and demand side policies, by focusing on system efficiency in terms of primary energy rather than on final energy use.***

The distinction between demand and supply sides does not reflect the reality of the complex energy system anymore. Focus on a single energy source or technology will result in sub-optimal and inefficient use of resources. The concept of a more holistic system (primary resource) efficiency combines energy efficiency with the use of renewables from the perspective of reduced fossil fuel use. It reconciles the three objectives of energy and climate policy: security of supply, climate protection and competitiveness and therefore should be consistently used to measure the impact of policy measures.

#### ***5. To reinforce international research programmes to provide a long-term framework for benchmarking and transfer of best knowledge / legislative practice in district heating and cooling.***

To ensure that research efforts benefit a larger number of stakeholders and to foster continued system adaptation with a view to enabling more and better integration of surplus and renewable energies, reinforcing national and international research programmes to provide improved financial and material basis for joint research activities on district heating and cooling is indispensable.

The new green energy deal must encourage the transfer of experiences with district heating and cooling, and this should be reflected in international cooperation agreements.