12th International Symposium on District Heating and Cooling

September 5th–September 7th, 2010, Tallinn, ESTONIA

	OPENING SESSION	
1.	**Opening** **Minister Juhan Parts, Ministry of Economic Affairs and Communication**	
2.	**The prospects for DH&C seen from the EU Commission point of view** Eva Hoos, European Commission, Directorate-General for Energy	
3.	**The prospect of district heating and district heating research in Germany (presentation)** Heiko Huther, German Heat and Power Association	
4.	**District heating in Estonia (presentation)** Tiit Rahkema, Estonian Power and Heat Association	
	SESSION 2 **Conceptions and studies in District Heating and Cooling**	**SESSION 3** **Efficiency issues of District Heating and cooling**
1.	**Integration of an IP based low-power sensor network in district heating substations (presentation)** *J. Gustafsson, H. Mäkitaavola, J. Delsing, J. van Deventer*	**Primary energy efficiency and systems engineering (presentation in Flash format)** *M. Berner, R. Ulseth, J. Stang*
2.	**On the radial contact pressure of parallel buried pipes for district heating (presentation)** *I. Weidlich, M. Achmus*	**Enhanced district heating and cooling systems – realisation of the low-ex concept (presentation)** *S. Bargel, C. Pollerberg, A. Knels, L. Huang, D. Müller, C. Dötsch*
3.	**Analysis on flat station concept. Preparing DHW decentralised in flats (presentation)** *J. E. Thorsen*	**Application of exergoeconomics to the optimization of building heating systems connected to district heating networks (presentation)** *C. Snoek, S. C. Kluiters*
4.	**Improved temperature performance of radiator heating system connected to district heating by using add-on-fan blowers (presentation)** *P.-O. Johansson, J. Wollerstrand*	**SlimNet: an innovative integral approach for improving efficiencies of district heating networks (presentation)** *M. W. P. van Lier*
	SESSION 4 **District Heating in areas of low density**	**SESSION 5** **District Heating Systems: Pipes properties**
1.	**A direct heat exchanger unit used for domestic hot water supply in a single-family house supplied by low energy district heating (presentation)** *M. Brand, J. E. Thorsen, S. Svendsen, C. Holm Christiansen*	**District heating pipes 200 mm below surface in a street with heavy traffic (presentation)** *A. Fransson, S.-E. Sällberg*
2.	**Challenges on low heat density district heating network design (presentation)** *M. Rämä, K. Sipilä*	**Study on the heat loss reduction method from the secondary pipelines in the apartment complex (presentation)** *B.-S. Park, Y.-E. Kim, S.-H. Park, Y.-H. Im, H.-J. Kim, D.-H. Chung, M. Chung*

3.	**Design of low temperature district heating network with supply water recirculation (presentation)** *H. Li, A. Dalla Rosa, S. Svendsen*	**Heat loss of flexible plastic pipe systems, analysis and optimization (presentation)** *EJ. H. M. van der Ven, R. J. van Arendonk*
4.	**Steady state heat losses in pre-insulated pipes for low-energy district heating (presentation)** *A. Dalla Rosa, H. Li, S. Svendsen*	**Comparison of competitive (semi) flexible piping systems by means of heat loss measurement (presentation)** *I. M. Smits, J. Korsman, J. T. van Wijnkoop, E. J.H.M. van der Ven*
5.	**Transient thermal conductivity of flexible district heating twin pipes (presentation)** *C. Reidhav, J. Claesson*	**Effective width - the relative demand for district heating pipe lengths in city areas (presentation)** *U. Persson, S. Werner*
	SESSION 6 **Renewable district heating and cooling**	**SESSION 7** **The aspects of district heating – CHP**
1.	**Integrating renewable energy into large-scale district heating systems (presentation in Flash format)** *P. Begerow, S. Holler*	**Analysis for the operation behaviour and optimization of CHP system in district heating and cooling network (presentation)** *Y.H. Im, H.-C. Park, B.-S. Park and M. Chung*
2.	**Solar district heating (SDH): technologies used in large scale SDH plants in Graz – operational experiences and further developments (presentation)** *M. Schubert, C. Holter, R. Soell*	**Improved primary energy efficiency of district heating networks by integration of communal biomass-fired combined heat and power plants with biomass pyrolysis (presentation)** *T. Kohl, N. A. Pambudi, T. Laukkanen and C.-J. Fogelholm*
3.	**Bioenergy combines in district heating systems: prospects for a future growth - industry? (presentation)** *E. Axelsson, A. Sandoff, C. Overland*	**CHP or power station?: question for Latvia (presentation)** *D. Blumberga, G. Kuplais, F. Romagnoli, E. Vigants*
4.	**Sea water district cooling feasibility analysis for Tallinn (presentation)** *A. Hani, I. Britikovski, H. Voll, T.-A. Kõiv*	**LCA of combined heat and power production at Hellisheiði geothermal power plant with focus on primary energy efficiency (presentation)** *M. R. Karlsdottir, O. P. Palsson, H. Palsson*
	SESSION 8 **District Heating: Management and Environment**	**SESSION 9** **District Heating and Cooling: policy and legislation impact**
1.	**Flexibility from district heating solutions to decrease costs of variable power production (presentation)** *J. Kiviluoma, P. Meibom*	**Policies and barriers for district heating and cooling outside EU countries (presentation)** *A. Nuorkivi, B. Kalkum*
2.	**Heat load variations of in district heating systems (presentation)** *H. Gadd, S. Werner*	**Barriers to district heating development in some European countries (presentation)** *D. Henning, O. Mårdsjö*
3.	**District heating as part of the energy system: an environmental perspective on `passive houses` and heat replacing electricity use (presentation in Flash format)** *M. Fröling, I. Nyström*	**Impact of the price of CO_2 certificates on CHP and district heat in the EU27 (presentation)** *M. Blesl*

4.	**Adaptive control of radiator systems for a lowest possible return temperature (presentation in Flash format)** *P. Lauenburg, J. Wollerstrand*	**Considerations and calculations on system efficiencies of heating systems in buildings connected to district heating (presentation in Flash format)** *M. Justo Alonso, R. Ulseth, J. Stang*
	SESSION 10 **District Heating: Case Studies**	**SESSION 11** **Optimisation and Simulation in district heating**
1.	**Distribution of heat use in Sweden (presentation)** *M. Borgström, S. Werner*	**Cutting costs of district heating systems by using optimized laying techniques (presentation in Flash format)** *A.Goebel, S. Holler*
2.	**Damages of the Tallinn district heating networks and indicative parameters for an estimation of the networks general condition (presentation)** *Hlebnikov, A. Volkova, O. Džuba, A. Poobus, Ü. Kask*	**Analysis of heat transfer in heat exchangers by using the NTU method and empirical relations (presentation)** *O. Gudmundsson, O. P. Palsson, H. Palsson*
3.	**Efficiency of district heating water pumping in Finland (presentation)** *A. Hakulinen, J. Lampinen, J Lavanti*	**Heat loss analysis and optimization of a flexible piping system (presentation)** *J. Korsman, I.M. Smits and E.J.H.M. van der Ven*
4.	**Modelling district heating cooperations in Stockholm – an interdisciplinary study of a regional energy system (presentation in Flash format)** D. Magnusson, D. Djuric Ilic	**Considerations and calculations on system efficiencies of heating systems in buildings connected to district heating (presentation)** M. Justo Alonso, R. Ulseth, J. Stang
	POSTER SESSION	
1.	**Heat load reductions and their effect on energy consumption** *C. Johansson, F. Wernstedt*	
2.	**The next step in evolution of DH technology: Transition driven by end-user demand** *M. Edin, N.-Å. Jönsson*	
3.	**Verification of heat loss measurements** *J.T. van Wijnkoop, E. van der Ven Liando*	
4.	**District heating and cooling with large centrifugal chiller-heat pumps** *U. Pietrucha*	
5.	**New economical connection solution for flexible piping systems** *C. Engel, G.-J. Baars*	
6.	**Competitiveness of combined heat and power plant technologies in Estonian conditions** *E. Latõšev, A. Siirde*	
	PLENARY SESSION	
	Panel discussion District Heating and Cooling in the Future (presentation) **Sustainable World Moderator:** Rolf Ulseth	