SESAAU2026 - 12th International Conference on Smart Energy Systems

TENTATIVE PROGRAMME AALBORG

Update 06-07-2026

Tuesday 22 September 2026

08:00-09:00	Registration and breakfast
09:00-10:45	**Plenary opening session: Integrated carbon capture solutions and global greenhouse gas thresholds** - Chaired by Poul Alberg Østergaard
09:00-09:15	**Henrik Lund and Glenda Napier:** Opening and Welcome to SESAAU2026
09:20-09:50	**Keynote Michael Lundgaard Thomsen, Director at Aalborg Portland**: CCS is not a technology fix - it is a real climate solution for Aalborg Portland
09:55-10:25	**Keynote Neven Duić, Professor at the University of Zagreb:** Process carbon emissions - storing, utilizing or offsetting within global carbon emission constraints
10:25-10:45	Debate
10:45-11:15	**Coffee and networking in sponsor area**

11:15-13:00 Parallel sessions

Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Special session
4th generation district heating concepts, future district heating production and systems	**CCUS and PtX technologies and the production and use of electrofuels in future energy systems**	**Smart energy systems tools and methodologies**	**Renewable energy sources and waste heat sources including PtX for district heating**	**4th generation district heating concepts, future district heating production and systems**	**Smart energy systems tools and methodologies**	**Energy efficiency in the electricity sector, buildings, transport and industry**	**Special session on Fault Detection and Diagnosis in DH systems – applications from the OptiHeat+ project**
							Chair: Dirk Vanhoudt
Session keynote Anna Cadenbach, Fraunhofer: Advancing 4GDH: Integrated Simulation and Experimental Evaluation of Six Transformation Pathways	**Session keynote Christian Breyer, LUT University**: Power-to-X implementation in energy system modelling: Status and outlook	**Session keynote Bram van der Heijde, VITO**: Developing and Testing Supervisory Control for District Heating and Cooling with Virtual Demonstrators	**Session keynote Benedetto Nastasi, Tor Vergata University of Rome:** Switching to Renewable Fuels in District Cooling for Buildings and Data Centers	**Session keynote Mads Sylvest Eegholm, Green Therma**: Deep geothermal energy to efficiently deliver heat to district heating	**Session keynote Matteo Giacomo Prina, EURAC:** How Climate Change Reshapes the Alpine optimal Energy Mix?	**Session keynote Marie Münster, DTU:** Assessing planetary boundaries of a future Danish energy system	**Session keynote Jad Al Koussa, VITO:** Optiheat+ - A research project on fault detection and diagnosis in district heating
Carolin Ayasse, TU Darmstadt: Open-Source Data Processing Pipeline for Modeling Spatially Resolved Urban Heat Sector Decarbonization Paths	**Alisson Julio, AAU**: Municipal System-Level Assessment of CO_2 Availability for eSAF production under Smart Energy Constraints	**Siddharth Sasidharan, TU Delft**: Control-Oriented Modelling for Flexible Low-Temperature District Heating and Cooling Networks	**Sam Roozbehani, DTU:** Integrated Planning and Control of Eco Industrial Clusters for Frequency Service Provision	**Stefan Retschitzegger, AEE**: Integration of deep geothermal heat in the district heating system of Lviv	**Juan Rodriguez Santiago, Fraunhofer**: Optimal Design and Control of Heat Pump Systems under Dynamic Energy Conditions in European Residential Buildings	**Simon Müller, THI**: Economic feasibility of waste heat integration from high-power charging stations for electric trucks in district heating networks	**Hoda Kamali, University of Antwerp**: Classifying Operational Faults in CHP-Integrated Collective Heating Systems: A Multi-Site Analysis
Arthur Lefebvre, UC Louvain: Must-haves beyond linear heat density for cost-effective fourth-generation district heating systems	**Mawaheb Mouftahi, Free University of Bozen-Bolzano**: Managing Excess Renewable Electricity in Integrated Energy Systems: A Comparative Analysis of Demand Flexibility, Storage, and PtX	**Moritz Zuschlag, RWTH**: Analysis of the flexibility potential of monoenergetic and hybrid energy hubs for third- and fourth-generation district heating	**Armin Ardehali, SDU**: Competing for electrons or molecules? Infrastructure planning in an eco-industrial cluster	**Helena Gailan, Geological Survey of Estonia**: Integrating medium-deep geothermal energy system into district heating in Estonia: experience from pilot stations towards to smart systems	**Jakob Fuchsberger, BEST**: A Framework for Cooperative, Optimization-based Control of Coupled Energy Systems	**Urban Žvar Baškovič, University of Ljubljana**: Prosumer Activation in Sector-Coupled Energy Systems: Heavy-duty EV Charging as a System Flexibility Challenge for a multi-sector prosumer	**Senne Van Minnebruggen, University of Antwerp**: Systematic Fault Characterization in District and Building Heating Systems: Methodology and Challenges
Valerie Fehst, Preventio: Zone-Level Leak Detection in District Heating Networks Using Multi-Scale Return-Flow Regime Learning	**Thibaut Wissocq, CEA Liten**: Quantifying the Flexibility Potential of District Heating Networks for France's 2035 Electrical Grid	**François Lédée, CEA-Liten**: Experimental comparison of smart controllers on a small district heating network	**Joel Bertilsson, Chalmers**: From Power Demand to Heat Supply: Optimizing Data Center Placement in the Nordics	**Sajedeh Roustaei, Politecnico di Milano**: A Multi-Criteria Framework for Comparing District Heating Configurations in Shallow Geothermal 5GDHC Systems	**Milad Mohammadyari, VITO**: On the Convergence of ADMM-Based Distributed Optimization for Nonconvex Demand Response in District Heating Systems	**Amela Ajanovic, TU Wien**: Energy Efficiency as a Key Enabler of Cost-Effective Transport Electrification	**Rob Knoops, VITO**: Fault Detection and Diagnosis in District Heating Substations: Lessons from Deploying Deep Learning
Agnes Engelter, TU Darmstadt: Enabling the flexible transition from 3rd to 4th generation district heating using dual pipe transmission lines	**Helena Thougaard Jensen, AAU**: Integrating CCUS into Municipal-level Energy System Analysis for a Carbon Neutral Society	**Valentin Kaisermayer, BEST**: Harnessing Building Energy Flexibility with Model Predictive Control	**Luis Enrique Ruiz Perdomo, ITE**: Hybrid Modelling of Data Center Energy Consumption and Waste Heat as a Basis for Integration into Smart Energy Systems	**Natalia Kozlowska, University of Liège**: Integration of a Geothermal Ground Temperature Response in Thermal Network Optimization	**Jasper Müller, TU Darmstadt**: Development of Operational Strategies for a Hybrid 4GDH Network using Dynamic Thermo-Hydraulic Simulation	**Jiahe Chu, THI**: Design and Evaluation of a Sector-Coupled Energy Management System for Supermarkets as Flexible EV Charging Hubs	**Nicola Frizziero, DTU**: Characterization of air-related fault signatures in water-based radiator systems for low temperature operations
Helge Averfalk, HH: Ranagård: Novel low-temperature heat distribution technology evaluation	**Fabio Sala, RSE**: Role of Hydrogen and CCUS in the Italian Power System by 2050: Scenario Results and Implications for Flexibility and Security	**Ben Spoek, RWTH**: Stochastic Consumer-Level MPC for Reliable Operation of District Heating Networks with Transport Delays	**Sabine Mönch, Fraunhofer**: Waste Heat Integration in Low-Temperature Urban District Heating: An Energy System Modelling Case Study on Heating and Cooling Interactions	**Leopold Riedl, TU Wien**: Spatial Representation of District Heating: Granularity Levels and Aggregation Methods for Energy System Modeling	**Ali Soleimani, MAU**: Towards trust in smart hybrid HVAC control systems from stakeholders' perspective	**Daniel Muschick, BEST**: Practical Aspects of Predictive Control of Electric Vehicle Charging Parks as Flexibility Providers	**Stefanie Fonken, VITO**: Fault detection and prioritization of substations in a residential district heating network - A demonstration case

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13:00-14:15	Lunch and networking

14:15-15:45 Parallel sessions						
Session 9	**Session 10**	**Session 11**	**Session 12**	**Session 13**	**Session 14**	**Special session**
Energy efficiency in the electricity sector, buildings, transport and industry	**4th generation district heating concepts, future district heating production and systems**	**Smart energy systems tools and methodologies**	**Planning and organisational challenges for smart energy systems and energy efficiency**	**Smart energy systems analysis**	**4th generation district heating concepts, future district heating production and systems**	**Special session on Nordic Hydrogen Hubs**
						Chair: Iva Ridjan Skov
Session keynote Oddgeir Gudmundsson, Danfoss: Case analysis: Energy efficiency of building level versus flat level ventilation-based heat supply systems for low-energy buildings	**Session keynote Henrik Lund Frandsen, DTU:** Robust and cost effective seasonal storage solutions for the energy system	**Session keynote Dietrich Schmidt, Fraunhofer:** Realizing autocommissioning and optimizing substation operations through machine learning	**Session keynote Ingo Leusbrock, AEE Intec:** Quality management of district heating and cooling DHC systems - A prerequisite for sustainability, affordability and transparency	**Session keynote Dmytro Zhuk, NUOS**: Resilient Power Systems under Uncertain Conditions: Distributed Generation and Smart Microgrids in Ukraine	**Session keynote Uffe Schleiss, Grundfos:** Hydronic Balancing Revisited: How Decentralised Pumping Unlocks ΔT in Legacy Networks	**Session keynote Rasmus Bo Bramstoft Pedersen, DTU**: Simple or too simple: Representing Power-to-X infrastructure in large-scale sector-coupled energy systems models
Kenneth Hoffmann, GEA: Affordable and Decarbonized District Heating with Heat Pumps	**Tripti Singh Rajput, Chalmers:** TIMES-Based Evaluation of Seasonal Thermal Energy Storage in District Heating System	**Plamen Bogdanov, RWTH**: Improving substation operation for fifth generation district heating and cooling networks: MPC development and evaluation in dynamic simulation	**Aadit Malla, TU Wien**: Planning cooling adoption: From cost-optimal pathways to real-world barriers	**Alessandro Mati, AAU**: Advancing climate resilience of energy systems through increased spatial resolution	**Alireza Etemad, University College Dublin**: Machine learning surrogate modelling for hydronic balancing in buildings connected to Thermal Source Networks	**Yousef Pourjamal, LUT University**: Subnational Dynamics of the Energy Transition: A NUTS2-Level Assessment of Renewable Energy Systems in Nordic and Baltic Regions
Pier Paolo Brancaleoni, University of Parma: Evaluating the Flexibility Potential of High Temperature Heat Pumps for Defossilized District Heating	**Femke Janssen, TNO:** Efficiently combining a seasonal heat storage, heat pump and electricity dynamics for a more sustainable HT-DHN	**Laura Block, RWTH**: Semi-Automated Fault Detection in District Heating Substations Using Machine Learning	**Yijie Su, Aalto University**: Modeling the Diffusion of Residential Demand-side Management Technologies with Building Performance and Heterogeneous Consumer Preferences	**Jihong Hang, RIPED**: Framework for Multi-Energy System Design Integrating Security, Resilience, and Greenness: A Regional Case Study in China	**Jan Eric Thorsen, Danfoss**: Economic case of building level cascaded substation concepts	**Frederik Fristed, DTU**: Impact of large scale infrastructure commitments under uncertainty in transport and energy systems
Rachel Parziale, ISFH: Monitoring Heat Pumps in 4 Residential Climate Districts in Germany	**Hrvoje Dorotić, EIHP:** Techno-economic and environmental assessment of underground seasonal thermal energy storage integration in the Zagreb district heating network	**Maarten Blommaert, KU Leuven:** Hybrid Electric Heater Substations for Cost-Effective, Low-Temperature District Heating Networks: A Physics-Based Optimization Approach	**Jonathan Vogl, KIT**: BehaviorGPT: Generating Household Activity and Mobility Schedules for Residential Energy Demand Modeling	**Philip Brandt, HAWK**: Comparison of the Power Outage Resilience of District Heating and Heat Pumps in a Residential District	**Rahul Mohandasan Karuvingal, RWTH**: Simulative Analysis and KPI-Based Selection of Rule-Based Control Strategies in 4th Generation District Heating Substations	**Frederik Dahl Nielsen, AAU**: Hydrogen uptake in the Nordic energy transition: national profiles, infrastructure implications, and system level impacts
Avril Bullock, Fairheat: Installation to Operation: Quality Assurance of Dwelling Heat Pumps on Ambient Loop Networks	**Natalie Peracha, THI**: Techno-economic assessment of seasonal thermal energy storage in low-exergy district heating networks	**Christian Holm Christiansen, DTI**: Semantic modelling of DHC substations: lessons from a multi-ontology exercise within IEA DHC Annex TS9	**Nermina Abdurahmanovic, Fraunhofer**: Modelling and simulation of user behaviour and gamification effects on heat pump flexibility in multifamily buildings	**Andrea Mackenzie, Fairheat**: Innovative Load Testing Methodologies to ensure Efficient Operation of Energy Centres in Complex Developments	**Mohammad-Reza Kolahi, University of Geneva**: How Decentralization Cuts Emissions in District Thermal Networks	**Jannis Kerl, NTNU**: Aligning network tariffs, connection regimes, and DER investments for grid-friendly industrial electrification

15:45-16:15	Coffee break

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16:15-17:45 Parallel sessions						
Session 16	**Session 17**	**Session 18**	**Session 19**	**Session 20**	**Session 21**	**Session 22**
Planning and organisational challenges for smart energy systems and energy efficiency	**Smart energy components, infrastructures and storage options**	**Smart energy systems tools and methodologies**	**4th generation district heating concepts, future district heating production and systems**	**Institutional and organisational change, energy communities and positive energy districts**	**Planning and organisational challenges for smart energy systems and energy efficiency**	**Smart energy components, infrastructures and storage options**
Session keynote Brian Vad Mathiesen, AAU: Designing the EU27 heat market for 2050: 55% district heating enabled by Energy Efficiency 2.0	**Session keynote Paula Ferreira, University of Minho:** Estimating the Temperature Elasticity of Electricity Demand	**Session keynote Michel Speetjens, TUE**: Capturing 3D unsteady heat transfer in variable-flow variable-temperature district-heating pipeline networks by a compact pipe model	**Session keynote Elisa Guelpa, Politecnico di Torino**: Insights into renewable energy integration in an existing district heating system	**Session keynote Christian Bjerrum Jørgensen, PlanEnergi:** Skills Development for the Future of District Heating and Cooling. A Key Enabler for the Green Energy Transition	**Session keynote Kristina Lygnerud, LTH**: Characteristics of low temperature district heating business models	**Session keynote Jacek Leszczyński, AGH University of Krakow**: Multiscale CAES technologies – an overview
Giulia Spirito, Politecnico di Milano: Supporting compliance with the Energy Efficiency Directive: a strategic planning tool for District Heating systems	**Antonia Queitsch, DLR**: Market Behavior of Thermal Energy Storage Power Plants in an Agent-Based Electricity Market Model	**Jorrit Heylen, KU Leuven**: How to Design Heating Networks? A Benchmark of Optimal Pipe Sizing and Design Guidelines, and Exploring the Potential of Peak Temperature Boosting	**Wen Liu, UU**: A global survey of techno-economic potential of sustainable district heating	**Per Alex Sørensen, PlanEnergi**: Skills4DHC. Qualification and recruitment of professionals for the district heating and cooling sector	**Daniel Møller Sneum, E-nerd**: Customers accepting extended connection times, while keeping inflation and costs down – a district heating customer business model that does it all?	**Dominik Gryboś, AGH University of Krakow**: Real-Time Optimization of the Discharge Process Control Strategy in Micro-CAES Systems for Adaptive Power Flexibility in Micro/Nano-Grids
Alessandro Capretti, A2A: A district heating decarbonisation plan: behind and beyond the scenes	**Chia-Ling Yang, TU Darmstadt**: Automatic Frequency Restoration Reserve Provision from District Heating Systems with Large-Scale Heat Pumps: A Feasibility Assessment	**Mazarine Roquet, University of Liège**: Use of digital twins to help the design of thermal networks: a case study application	**Md Asiful Islam, OVGU**: Techno-economic evaluation of power-to-heat integration for a 30% renewable share in an existing fossil-based German district heating system	**John Kapetanakis, HAWK**: Aligning skill development in higher education with workforce needs in the district heating and cooling sector: Insights from a European survey	**Erik Schlahn, HHL**: Financing and cooperation models for utilities in integrated energy systems – a European taxonomy	**Jan Markowski, AGH University of Krakow**: Energy Efficiency Analysis of a Multi-Piston Expander for smart Micro-CAES System
Alexander Meisinger, OTH Regensburg: Bridging the green hydrogen gap: From carbon revenues to Power-to-X markets in Europe	**Johan Dalgren, KTH**: The impact on DHS due to temperature losses in decentralized Thermal Energy Storage and how to reduce peak production at discharge	**Felix Hallett, Fairheat**: Re-evaluating Cooling Demand Diversity to Optimise Residential CHW Network Design	**Niklas Denter, THI**: Electricity-Driven or Heat-Driven? A Comparative Techno-Economic Analysis of Renewable Sector-Coupled District Heating Systems in Germany	**Matteo Pozzi, Optit**: The DHC Academy Alliance: Scaling the Value Chain through a Permanent Education & Training Marketplace	**Søren Djørup, NORCE**: Economic impacts of thermal energy storage at the national level	**Adrien Vautrin, Bengt Dahlgren AB**: Reduce-Order Model of a Cavern Thermal Energy Storage based on Semi-Analytical Approach
Osamu Kunitomo, Tokyo Gas: A Study on Technology Generations the District Heating and Cooling in Japan - The Necessity for a Definition of Technology Generations in Japan	**Anas Algarei, University of Edinburgh**: A TESPy-Based District Cooling Modeling Tool for Energy Flexibility Characterization in Sector-Coupled Energy Systems	**Santiago Valencia-Cañola, UNAM**: Physical and thermo-economic feasibility of a variable-geometry ejector refrigeration system	**Robert Puknat, ISFH**: Heat Pumps vs. Direct Electric Heating: Impact of PV Direct Marketing on the Techno-Economics of Low-Energy Homes	**Cosima Amanda Wörle, Fraunhofer:** Towards Standardised Documentation of Experimental Research in District Heating and Cooling	**Caroline Stiel, DIW Berlin**: Green Heat, Higher Prices? The Price Effects of Decarbonizing District Heating in Germany	**Melisa Gounesher, KTH**: Reduced-Order Modelling of Molten Salt Thermal Energy Storage for Energy System Optimization

19:30	**Conference dinner**

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Wednesday 23 September 2026

09:00-10:45 Parallel sessions

Session 23	Session 24	Session 25	Session 26	Session 27	Session 28	Session 29	Session 30
4th generation district heating concepts, future district heating production and systems	**Electrification and sector coupling of transport, heating and industry**	**Smart energy systems tools and methodologies**	**Geographical information systems (GIS) and mapping of demands and resources**	**4th generation district heating concepts, future district heating production and systems**	**Planning and organisational challenges for smart energy systems and energy efficiency**	**Energy efficiency in the electricity sector, buildings, transport and industry**	**Smart energy systems analysis**
Session keynote Vittorio Verda, Politecnico di Torino: Integration of heat pumps and short/long term thermal storage units for the transition of district heating networks	**Session keynote Phillip Dale, University of Luxembourg**: Future assessment of electrical generation and grid constraints in Luxembourg	**Session keynote Shihua Luo, UESTC**: Multi-Scenario Optimization of China's Power Sector Toward 2060 Under Renewable Cost Uncertainty via Ensemble Surrogate Modeling and Active Learning	**Session keynote Els van der Roest, Municipality of Utrecht:** Does it fit? The spatial impact of different sustainable heating strategies	**Session keynote Andra Blumberga, RTU**: Designing climate neutrality policies for the energy sector: insights from a system dynamics model	**Session keynote Morten Jordt Duedahl, DBDH**: The road to 100% renewables: Why practical detours and incremental change can outperform perfect but limited solutions	**Session keynote Hanne Kauko, SINTEF**: Cross-sector integration of buildings, transport, and industry for peak-load reduction in low-carbon energy systems	**Session keynote Bernd Möller, EUF**: Biogas infrastructure network analysis for methanation in Schleswig-Holstein
Johannes Pelda, HAWK: Model-based dimensioning of a heat pump and a thermal storage in a CHP-based district heating system and their heat generation pathways towards 2040	**Heidi Kirppu, VTT**: Electrified District Heating as a System Balancing Resource in Nordic Power Systems: Operational Flexibility and Asset Utilisation in Finland	**Ali Mohammad Nia, AAU**: Sustainable Sector Integration and Multi-Objective Optimization of Heat Symbiosis by Real-Time Digital Twin Technology	**Franz Mauthner, AEE:** CoSpatial Heat: A GIS-based framework for integrated heat planning and gas grid decommissioning	**Maria Pedrosa, INEGI**: Decision-Support Tool for Waste Heat Recovery from Power Transformers for Grid and Heat Decarbonization	**Frederike Kuperjans, RWTH**: "Planning better when knowing less" - Optimizing Adaptive Transition Pathways for Distributed Multi-Energy Systems Under Deep Uncertainty	**Michael Frank, TU Darmstadt**: From Robust to Antifragile Industrial Energy System Planning: Comparative Assessment of Optimization Approaches under Uncertainty	**Thomas Elliot, AAU**: The hidden environmental and systemic trade-offs of Power-to-Gas
Felix Mergenhagen, DIW Berlin: Large-Scale Heat Pumps for the Decarbonisation of District Heating: A case study in the German region of Lüneburg	**Mathias Berg Rosendal, DTU**: Prioritising Flexibility Options in Future Energy Systems	**Fiona Feurstein, FHV**: Assessing Steady-State and Transient Methods for Thermal Simulation of District Heating Networks	**Nicola Tait, University of Glasgow:** Spatial techno-economic modelling of heat decarbonisation solutions for urban energy communities to utilise local heat resources	**Henrique Monteiro, INEGI**: Three Dimensional Periodic CFD Analysis of Transient Heat Transfer in CORE Type Transformer Disc Windings	**Florian Labaude, University of Strasbourg**: Integrate local energy systems in regional strategies – Exploring the multilevel dimension in the case of the Eurometropolis of Strasbourg, France	**Jonas Gölz, TU Darmstadt**: An Integrated Modeling Approach for Transformation Measures in Industrial Energy Systems	**Diamantis Almpantis, LTH**: Sector-Coupled Green Hydrogen Microgrid Optimization: Deep Reinforcement Learning vs. MILP under Forecast Uncertainty
Mohd Basit Wani, TalTech: Impact of Integrating Local Renewable Heat Sources with District Heating in Non-Residential Sector: A Case Study in Tallinn, Estonia	**Buster Bukart Hansen, SDU**: A Bi-Level Sector Coupling Framework for Multi-Actor Energy Systems: Integrating Techno-Economic Optimisation and Cooperative Game Theory	**Nicholas Tedjosantoso, HAW Hamburg**: Towards Scalable District Heating Network Simulation: A Tensor-Based Multilinear Approach	**Nicolas Oliver Marx, AIT:** Flexible Biochar Production at Small-Scale Biomass-Based District Heating Plants: A GIS-Based Techno-Economic Feasibility Assessment	**Kadri Männasoo, TalTech**: Evaluating the Introduction of a Two-Part District Heating Tariff: Evidence from a Small Network in Estonia	**Bennet Köppchen, TU Köln:** Comparing Germany's Pathways to a Decarbonised Heat Supply: A Meta-Analysis of Transition Scenarios for the Heating Sector in the Future Energy System	**Martin Grasenack, HAW Hamburg**: An integrated agent-based modelling framework for increasingly electrified industrial sites	**Bianca Helbach, RWTH**: Component Model Selection to Balance Complexity and Accuracy for Operational Optimization of Multi-Energy Systems
Fabian Feuchter, THI: Characteristics and Yield Potential of Vertical Bifacial Agri-Solar Thermal Systems for Dual Land Use and District Heating in Europe	**Benjamin Freischlad, TU Darmstadt**: Exploring price-based demand response based on variable emission factors of electricity in sector-coupled energy systems	**Nyasha Grecu, AIT**: What is the optimal solution? Methods for considering uncertainty in district heating decarbonization	**Ulrich Ganslmeier, TU München:** Noise-Aware GIS Mapping of Air-to-Air Heat Pumps: Potential for Replacement of Individual Gas Floor Heating in Munich	**Igor Krupenski, TalTech**: Motivation Tariffs in District Heating: Assessing Efficiency Gains in an Urban Network in Estonia	**Marie-Emilie Ingen Housz, City of Rotterdam**: A data driven approach to a realistic urban heat transition in Rotterdam	**Xin Bin, LTH**: Energy Optimization of Heat Exchanger Network under Fouling and Cleaning Constraints in Multiproduct Liquid Food Process	**Jinze Li, RIPED**: Renewable-Based Hybrid Energy System Enabling Electrification and Joint Decarbonization of the Oil and Gas and Petrochemical Sectors
Daniele Anania, EURAC: Including operational constraints in modelling of district heating decarbonization scenarios	**Daniel Zinsmeister, Stadtwerke München**: Data-Driven City-Scale Archetypes for Munich's Residential and Non-Residential Building Stock	**Felix Till Schattmann, ISFH**: Accelerating Building Energy Simulations with Neural Network Surrogate Models	**Ingela Becker-Grupe, HAWK:** Systematic GIS-based analysis for integration of multiple low-temperature waste heat sources into an existing district heating network	**Lukas Kranzl, TU Wien**: Modeling market adoption of building-side measures for district heating temperature reduction: the role of subsidies and motivational tariffs	**Miguel Chang, IFE**: Looking within and beyond energy system modelling - A survey on perceived model biases, model coupling, and integrating non-energy perspectives	**Jenni Leinonen, Aalto University**: Economics and CO2 Emission reductions of Electrifying Industrial Steam Production in Volatile Electricity Markets	

10:45-11:15 Coffee and networking in sponsor area

Wednesday 23 September 2026

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11:15-13:00 Parallel sessions

Session 31	Session 32	Session 33	Session 34	Session 35	Session 36	Session 37
Smart energy systems tools and methodologies	**4th generation district heating concepts, future district heating production and systems**	**Institutional and organisational change, energy communities and positive energy districts**	**4th generation district heating concepts, future district heating production and systems**	**Smart energy systems tools and methodologies**	**Smart energy components, infrastructures and storage options**	**Electrification and sector coupling of transport, heating and industry**
Session keynote Ralf-Roman Schmidt, AIT: From Data to Value: Quantifying the Economic Benefits of Digitalisation and the Role of Data Spaces in District Heating Networks	**Session keynote Paweł Wojnarowski, AGH University of Krakow:** Urban geothermal energy as a component of smart energy systems: multi-use subsurface solutions for local heat decarbonization	**Session keynote Lisa Hjerrild, SDU:** From Rights to Responsibilities: Citizens in the 2026 EU Energy Package	**Session keynote Jake Adamson, Fairheat:** Retrofitting heating and hot water measures in a 1970s UK operational courts building to enable connection to a low carbon district heating network	**Session keynote Morten Karstoft Rasmussen, Kamstrup:** From Smart Meter Data to Action: Software-Defined Alarms for District Heating Optimization	**Session keynote Reinhard Haas, TU Wien**: On future market prospects of electricity storage	**Session keynote Anders N. Andersen, EMD**: Adding hydrogen storage radically changes design of e-Methanol plants
August Brækken, SINTEF: The role of building heating conversion in regional energy system transitions	**Jerik Catal, AIT**: Decarbonizing Existing Districts – what are the options for Anergy Networks	**Jonathan Hachez, VUB**: Strategic Uncertainty Modeling for Citizen Energy Communities: A Gaussian KDE Approach to Revenue Planning and Negotiation Support	**Charlie Pattison, Fairheat:** Decarbonising a hot water system in a 19th century City Hall building with UK listed building status to enable a district heating network connection	**Hossein Alimohammadi, TalTech**: Thermodynamic Optimization of Heat Source Placement in District Heating Networks for Reduced Mixing Losses	**Ilia Skorniakov, Aalto University**: Industrial behind-the-meter battery storage profitability under future price volatility: 2030 Nordic-Baltic analysis	**Mohammad Hossein Fouladfar, LTH**: Valuing Hydrogen Waste Heat in District Heating
Paula Oberfeier, Fraunhofer: Time Series Aggregation Methods for Municipal Energy System Modeling: Application to District Heating Systems with Renewable Heat Sources	**Kai Droste, RWTH**: Simulative Investigation of an Optimized Shallow Geothermal Borehole Layout in a 4th-Generation District Heating Network	**Marko Keber, Free University of Bozen-Bolzano**: Strengthening Smart Energy Systems Through Flexibility Mechanisms: Comparative Insights from Southern European Case Studies	**Christopher Fielding, Fairheat:** Bridging the Performance Gap: Applying Co-Heating Analysis to Retrofit Design	**Julian Plautz, HAWK**: Methodology for allocating network losses to consumers, applied at the Göttingen North Campus	**Johanna Roth, AEE**: An exergetic comparison of distinct Carnot Battery concepts for industrial applications	**Anton Achhammer, OTH Regensburg**: Integrating Geothermal Potential and Hydrogen Imports in PyPSA-Earth: A Case Study of Japan's Energy Transition
Jelena Ziemele, Riga Energy Agency: Wastewater Heat Utilization in Riga: Challenges and Opportunities	**Nirav Patel, TU Wien**: Multi-Year Optimization of District Heating Systems with High-Temperature Borehole Thermal Energy Storage	**Mirko Morini, University of Parma**: Impact of incentive allocation in optimal design of Renewable Energy Communities	**Nikolaus Diez, TU Wien**: A multi-period optimization approach for renovation pathways in building portfolios under data scarcity and uncertainty	**Tanel Kirs, Talinn University of Technology**: Measuring District Heating Network Effect on District Cooling Network Losses in an Urban Environment	**Stefan Bordihn, ISFH**: Interpretable neural network prediction of electricity demand in a single-family home system with heat pump, photovoltaic and battery storage	**Thor Alexis Sazon, IFE**: Energy system implications of planned hydrogen production in Norway
Hesham Ali, TalTech: Using a marine digital twin to identify promising seawater heat pump applications in Baltic Sea district energy systems	**Dmitry Romanov, HAWK**: Cost-effectiveness of coaxial medium-deep borehole thermal energy storages for various waste heat sources and district heating temperatures	**Hironao Matsubara, ISEP**: Overcoming VRE Curtailment and Fostering Community Power: A Comparative Analysis of Smart Energy Systems in Japan's Decarbonization Leading Areas	**Arjuna Nebel, TH Köln**: Analysing Temporal Heat Demand Effects of Building Retrofitting on Energy Systems: Endogenous Modeling of Germany's Building Sector in PyPSA-Eur	**Enrico Ghidoni, DTU**: Techno-economic and hydraulic feasibility evaluation of energy saving strategies for reduced circulation heat losses in domestic hot water systems	**Evi Monique Kasper, HS Offenburg**: Measurement-Based Load Disaggregation for State Reconstruction in Medium-Voltage Grids with Limited Observability	**Ilona Malmipuro, Aalto University**: Electricity market impacts of renewable hydrogen production and implications on the profitability of flexible generation in Finland in 2030
Abdulraheem Salaymeh, HAWK: Multidimensional Evaluation of Heat Source–Demand Matching and Techno-Economic Trade-Offs in Heat Transition Pathways	**Arash Farnam, VITO**: A Hierarchical Control Framework for District Heating Networks with BTES Using Dynamic Programming and MPC	**Ann-Kathrin Rathmann, Osnabrück University of Applied Sciences**: Economic Potential of Energy Sharing for SMEs in German Commercial Areas – An oemof Optimization Approach	**Ruta Vanaga, RTU**: Adaptive Thermal Coupling Control Layer in PCM–Aerogel Building Façades for Enhanced Energy Performance	**Jan Westphal, TUHH**: A control strategy for reducing heat losses in summer operation of a district heating network	**Sylvia Wüst, HS Offenburg:** Assessing the Impact of Dynamic Operating Envelopes on Future Low-Voltage Grids	

13:00-14:00	**Lunch and networking**

14:00-16:15	**Plenary closing session: Geopolitics, autonomy and Europe's energy future -** Chaired by Brian Vad Mathiesen
14:00-14:30	**Keynote Jan Rosenow, Professor at the University of Oxford**: Electrofficiency: Conversion Efficiency, the Primary Energy Fallacy, and the Demand-Side Case for Electrification
14:35-15:05	**Keynote Ditte Brasso Sørensen, Deputy Director at Think Tank Europa:** What's holding back the Energy Union?
15:05-15:25	**Debate**
15:30-15:45	DHC+ Student Award Ceremony
15:50-16:05	Best Presentation Award Ceremony by Poul Alberg Østergaard
16:05-16:15	**Henrik Lund and Hans Jørgen Brodersen:** Closing