

# Innovative Optimization and Planning Tools for Electricity, Gas and Heating Grids

18th  
September

Online Event

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WORKSHOP LINK



## Dr. Nicola Zaccarelli

Dr. Nicola Zaccarelli obtained a degree in Environmental Science from the University of Parma (Italy) and a Ph.D. in Fundamental Ecology from the University of Salento (Italy). Before joining encoord GmbH, Dr. Zaccarelli worked as Adjoint Professor of Numerical Ecology and Geographic Information Systems at the University of Salento. He joined the Joint Research Centre of the European Commission in the Netherlands, working on the security of gas supply issues, risk assessments, and hydraulic modeling of gas infrastructures. At Encoord GmbH, Dr. Zaccarelli covers the role of lead support for gas modeling and planning, GIS and statistical analysis, and hydraulic modeling. Dr. Zaccarelli co-authored 20 scientific papers and 4 books.



## Christian Doczekal

Christian Doczekal is an expert in the energy sector with a particular focus on district heating networks. He works at GET (Güssing Energy Technologies GmbH), where he deals with the optimization of district heating networks. He supports several district heating network operators in Austria in making their systems more efficient. He also works as a lecturer and develops tools for optimizing district heating networks. These tools help operators to better manage their networks and increase energy efficiency.

## Agenda

9:00

Introduction

9:05

Presentation of a demonstration of an integrated energy planning tool for electricity, gas, and thermal networks  
(Nicola Zaccarelli, encoord GmbH)

The "Scenario Analysis Interface for Energy Systems" (SAInt) is a software platform designed to model integrated energy networks and markets, supporting energy sector stakeholders in strategic decision-making, risk management, and energy transition planning.

9:45

Presentation of the innovative HYPERGRYD exergoeconomic optimization tool to increase the efficiency and profitability of district heating networks  
(Christian Doczekal, GET (Güssing Energy Technologies GmbH))

The presented HYPERGRYD tool helps to minimize the operating costs of networks by suggesting the most efficient combination of energy sources and technologies and weighing up whether decentralized feed-in makes sense. Precise, data-driven decisions can optimize the use of renewable energy sources and reduce the carbon footprint. Real case studies and simulations show how grids can be adapted to changing market conditions and energy prices.

10:30

Open discussion

