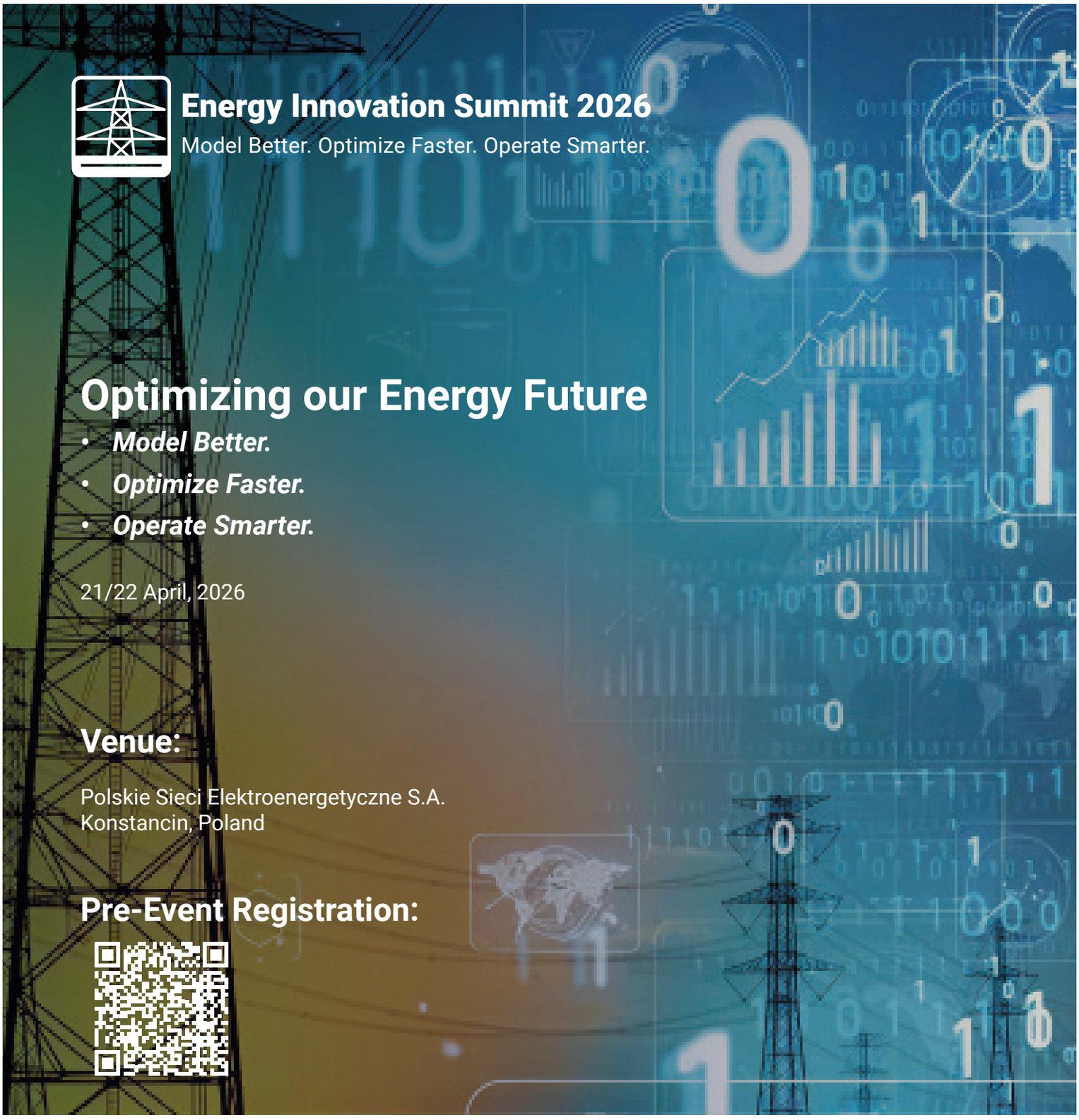


Energy Innovation Summit 2026

Model Better. Optimize Faster. Operate Smarter.

Optimizing our Energy Future

- ***Model Better.***
- ***Optimize Faster.***
- ***Operate Smarter.***

21/22 April, 2026

Venue:

Polskie Sieci Elektroenergetyczne S.A.
Konstancin, Poland

Pre-Event Registration:

The Summit is co-hosted by

Gurobi® & PSE Polskie Sieci Elektroenergetyczne

Optimizing Europe's Energy Future

From Ambition to Action

Optimization as Europe's Decision Infrastructure for the Energy Transition

Europe's energy ambitions are clear. Turning them into operational reality is not.

Transmission and Distribution System Operators are facing an unprecedented combination of system growth, uncertainty, regulatory pressure, and interdependence across planning horizons, voltage levels, and national borders. In this environment, Modeling and Optimization are no longer specialist tools — they are becoming the analytic backbone of power-system decision-making.

Why Warsaw, Why Now!

Across Europe, optimization is moving from isolated applications to strategic decision infrastructure.

The Summit has always been a TSO-led, practitioner forum. Warsaw — co-hosted by PSE — anchors it in real operational priorities and brings together the operators, researchers, and technology leaders who are turning optimization from isolated use cases into production-grade decision infrastructure — now, as Europe shifts from pilots to implementation at scale.

The Energy Innovation Summits are designed for those shaping that transition — technically, operationally, and organizationally.

- Not as a sales event.
- Not as a purely academic conference.
- **But as a focused, practitioner-level forum to exchange experience, challenge assumptions, and accelerate impact.**

Day 1 examines where optimization already shapes power-system responsibilities, where further value remains untapped across the ecosystem, and discusses best practices for applying optimization-based decision support.

Day 2 the **morning session** focuses on a central question for system operators, market actors, regulators, and solution providers alike: How do we move from successful models and pilots to robust, long-lived, production-grade decision systems? **Three afternoon breakouts** focus on a **1)** interactive Deep Dive Sessions with Gurobi Optimizer, **2)** PSE experts discussing Tools for Transformation: Open Source and Proprietary Models in the Energy Transition, and **3)** a workshop with Gurobi's GUROBOT: From Model to Impact – Turning Optimization into Business Action

Energy Innovation Summit

Model Better. Optimize Faster. Operate Smarter.

Day 1 – Tuesday, April 21st

TIME	SESSION
08:15 – 09:00	Registration & Welcome Coffee - Join us for a light Welcome Breakfast.

09:00 – 09:15 Host's Welcome to Day 1

The Summit has always been a TSO-led, practitioner forum. This one anchors it in real operational priorities and brings together the operators, researchers, and technology leaders who are turning optimization from isolated use cases into production-grade decision infrastructure – now, as Europe shifts from pilots to implementation at scale.

Michal Klos and Frank Häger will welcome the participants, introduce the agenda sessions and session chairs.

09:10 – 09:30 Opening remarks – Making sense of the transformed energy system: Optimal design and decision making for low carbon electricity

Tomasz Sikorski, Vice President**, PSE**

*Notes:*_____

09:30 – 10:00 The evolving role of optimization in electricity market design and regulation

Revising electricity market design and regulation amid rapid sectoral change is highly debated. While theory and case studies shape positions, what ultimately matters are measurable impacts on consumer bills, reliability, environmental outcomes, and market revenues. Since any rule change creates winners and losers, quantitative impact assessments increasingly determine whether reforms move forward or are blocked.
At the core of these assessments are optimisation models. Such models simulate market outcomes under alternative designs, but must balance accuracy, comprehensibility, and timely delivery.
In this talk, I present two case studies using optimisation across the electricity value chain: wholesale market design and network tariff design—illustrating how quantitative analysis helps translate policy proposals into concrete, measurable consequences.

Tim Schittekatte, Senior Director; Part-time Professor**, FTI Consulting; Florence School of Regulation**

*Notes:*_____

Session Energy First – When Operational Responsibility Demands Optimization

Session Chair: Robert Tomaszewski, Director of Strategy Department, PSE

10:00 – 10:30 Electricity market & system optimization at its limits. What comes next (to it)?

Electricity markets and energy system evaluation, planning and forecasting are increasingly driven by highly sophisticated optimization models. As renewable penetration rises, sector coupling deepens and flexibility becomes decentralized, the limits of classical optimization become more visible. Perfect foresight assumptions, linearized physics, equilibrium simplifications and necessary levels of abstraction struggle to capture some of the key aspects of market & system reality such as high volatility, large volumes of decentralized decisionmakers with different access to information, strategic behavior, data uncertainty and real-time operational complexity.
The result is a growing gap between model-optimal solutions and system-realizable outcomes. Based on latest experience from two large optimization-based projects, this talk explores how and

where optimization can reach its structural boundaries. It will conclude with views and ideas on how these challenges can potentially be overcome to better capture growing system and computational complexity and how optimization approaches can be meaningfully augmented.

Ksenia Tolstrup, Director Technical Advisory, **Magnus Energy (NL)**

*Notes:*_____

10:30 – 11:00 Morning Networking Break

11:00 – 11:30 A PyPSA-TSO Ecosystem: Turning Complex Models into Actionable Insights

Energy system modelling often leaves a gap between technical experts and decision-makers seeking clear answers to business questions. At APG, we address this gap by embedding our energy system model into a broader tool eco system. This talk shows how we make complex modelling usable in practice: with our simmulation plattform VAMOS for integrated modelling workflows, a visualization suite for clear and compelling communication of results, and the BEA add-on for cost and economic scenario analysis. Together, these tools connect data-intensive model outputs with real-world planning and strategic decisions.

Swantje Möhle, Energy Modeling Engineer**, APG – Austrian Power Grid**

*Notes:*_____

11:30 – 12:00 Optimal Topology Switching

What does it take for optimization to support real operational decisions in power grids?
Nico Westerberg (50Hertz), Manuel Ruiz (RTE), and Endika Urresti Padrón (PSE) will discuss topology switching decision support and the practical requirements around it.
This session does not present optimization as magic. It looks at what happens when mathematical quality meets operational responsibility: security constraints, validation effort, implementation discipline, and the need for recommendations that are not only strong analytically, but also usable and trustworthy in practice.
A valuable session for anyone working on grid operations, decision support, and the practical role optimization may play in critical infrastructure.

Endika Urresti Padron, Expert**, PSE**

Manuel Ruiz, Advanced Expert in Decision Making**, RTE**

Nico Westerbeck, Software Architect**, 50Hertz Transmission GmbH**

*Notes:*_____

12:00 – 12:15 Speaker Q&A

12:15 – 13:15 Lunch Break & Networking

Session

Optimization First – Unlocking Untapped Value for TSOs,

Session Chair: Michał Kłos, Computational Methods Development (PSE)

13:15 – 13:45

Trustworthy AI for Power System Optimization

Power system optimization is central to power system operation but usually challenging to solve efficiently due to its nonlinear and nonconvex nature. Neural Networks (NNs) are shown to offer surrogates that solve order of magnitudes faster complex optimization problems, yet their black-box nature raises concerns about potential constraint violations that can compromise safety. In this talk, we introduce methods for verifying neural network behaviour in power systems and obtain provable worst-case guarantees of their performance. We present how we can integrate these methods directly into training, producing models that are both accurate and provably safer. Such methods can build the missing trust of power system operators on neural networks and unlock a series of new applications in power systems and other safety-critical systems.

Spyros Chatzivasileiadis — Professor and Head of Section for Power Systems, DTU (DK)

Notes:

13:45 – 14:15

Old and New Frontiers in Power Systems Optimization: From Unit Commitment (UC) to UC Optimal Transmission Switching and Beyond to LLM-Augmented Development

The optimization problems faced by Transmission System Operators (TSO), in Europe and elsewhere, are growing in scale and complexity. Classical unit commitment is increasingly intertwined with network-aware formulations — optimal transmission switching, security-constrained dispatch, and contingency analysis — while the European transition to 15-minute market time units and the operational challenges highlighted by the April 2025 Iberian blackout underscores the urgency of rethinking both models and solution methods. On the other hand, Market Operators (MO) face distinct challenges: energy market clearing mechanisms must reconcile economic efficiency with the physical constraints that TSOs manage in redispatching. New proposals such as Segmented Pay-as-Clear (SPaC), recently proposed by Frangioni and Lacalandra, add further layers of combinatorial and economic structure to this already rich landscape. Against this backdrop, a profound and arguably unprecedented transformation is reshaping how these problems are conceived, studied, and implemented. The emergence of frontier Large Language Models — specifically Claude Opus 4.5 (November 2025) and Opus 4.6 (February 2026) — has opened a radically new mode of working for the optimization practitioner and specialist. Crucially, this extends to domain experts — engineers, market analysts, system operators — who possess deep problem knowledge but not necessarily mathematical programming expertise: frontier LLMs now enable them to translate natural-language problem descriptions into precise, computationally efficient formulations, bridging one of the most significant historical gaps in applied optimization. Notably, earlier model generations, in the author's experience through the summer of 2025, lacked the reasoning depth required for the work described here — the qualitative leap occurred only with the latest frontier models. Drawing on months of intensive firsthand use, this talk illustrates how LLM-augmented development extends well beyond code generation: joint exploration of new mathematical ideas, critical analysis of research papers, design and testing of formulations and decomposition strategies (e.g. Benders, Lagrangian), iterative Julia/JuMP development, and technical document production. The key thesis is that sustained interaction with a domain-capable LLM shifts the bottleneck from implementation to insight, enabling study, prototyping, and comparative testing at an estimated 10–30× pace — a compression that qualitatively changes what a single researcher or small team can attempt.

Fabrizio Lacalandra, Technical Secretariat of the Energy Division**, Italian Regulatory Authority for Energy, Networks and Environment (ARERA)**

Antonio Frangioni, Professor**, University of Pisa**

Notes:

14:15 – 14:30

AI for Real-Time Power Grid Optimization (Recording and remote Q&A)

in many power systems applications, the same optimization problem is solved repeatedly for instances taken from a distribution that can be learned or forecasted. This talk studies how to speed up these parametric optimization problems to meet real-time constraints present in many applications. It introduces the concept of optimization proxies that fuse AI and optimization to that learn the input/output mappings of parametric optimization problems. The impact of this novel methodology is demonstrated on several grid optimization applications, including economic dispatch, real-time risk assessment, security-constrained optimal power flows, and the scheduling of hydro-resources. These experimental results indicate that the fusion of AI and Optimization can deliver outcomes that the two technologies cannot achieve independently.

Pascal Van Hentenryck, Head of AI Innovation Lab, **Gurobi Optimization**

Notes:

14:30 – 14:45 Speaker Q&A

14:45 – 15:15 Coffee Break

Session **Moderated Closing Session: Final Keynote & Panel Discussion**

Session Chair: Aleksandra Gawlikowska-Fyk, Strategy Department (PSE)

15:15 – 15:45 Optimization at the crossroads of system operations and European markets

In this session we will gather an overview on the different processes on local, regional, and central level that shape the outcomes of European markets on a daily basis. We will also introduce the benefits of market coupling to address the question on how to effectively communicate benefits of optimization to a wider audience.
The Keynote includes reflections of Day 1.

Marius Schrade, Expert Market and System Operations**, 50Hertz Transmission GmbH**

Notes:

15:45 – 16:30 Panel Discussion

Reflections of the day, shared learnings

Notes:

16:30 – 16:45 Closing of Day 1

Michał Kłos, Deputy Director of NCAE, **PSE**
Frank Häger, Director Power & Utilities EMEA, **Gurobi Optimization**
Lennart Lahrs, Senior Technical Account Manager, **Gurobi Optimization**

19:00 – 22:00 Networking: Gala Dinner & Drinks (Grand Mercure Warsaw Centrum)

Organizer Contacts:
Content Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Your Notes

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Day 2 – Wednesday, April 22nd

TIME	SESSION

Keynote

09:00 – 09:20

From Ideas to Reliable Decisions

This keynote offers a high-level look at what it really takes to turn optimization from a promising idea into a working part of your organization. Beyond the mathematics, success depends on choices about scope, experimentation, technology, and change: where to start, how ambitious to be, how to learn quickly, and how to introduce new ways of working without creating unnecessary disruption. It also explores how to build solutions people understand, trust, and actually use. The session is intended to frame the broader challenges and opportunities, with the more specific methods, examples, and technical questions taken up in the in-depth sessions that follow later in the day.

Ronald van der Velden, Manager of Technical Account Management**, Gurobi Optimization**

Lennart Lahrs, Senior Technical Account Manager**, Gurobi Optimization**

*Notes:*_____

Session — Making Optimization Work, chaired by Michał Kłos

09:20 – 09:40

Robustly Integrating Optimization Models

Developing robust optimization applications requires attention not only to the model, but also to reproducibility, variability, traceability, and numerical stability. This talk presents practical guidance for using Gurobi in a robust way, including deterministic inputs, variability assessment, run logging, warning analysis, tolerances, and scaling. The goal is to help you build optimization workflows that you can trust in production.

Xavier Nodet, Senior Product Manager, Optimizer**, Gurobi Optimization**

*Notes:*_____

08:55 – 10:05

Robustly Integration Optimization Models

Szymon Kitowski, PSE

*Notes:*_____

10:00 – 10:20

Reliability first: Optimization Tools from Scratch to Maintenance

He will present best practices developed while working on optimization tools delivered by PSE Innowacje to PSE, focusing especially—but not exclusively—on addressing the following questions:

How do we know that an optimization tool is correct?
How do we govern and hand over an optimization tool?

Rafał Dzikowski, Optimization Expert, **PSE**

*Notes:*_____

10:20 – 10:50

Morning Coffee Break

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

10:50 – 11:10

From Requirements to Reality: Building Congestion Relief Optimization That Works in a Control Room

Building an optimization model that works in a lab is one thing. Building one that works in a control room, reliably, day after day, in a live operational environment, is something else entirely. And building the operational process that makes it possible is equally demanding because in the end, it is the client's process and requirements that design the model, not the other way around.

This presentation is delivered jointly by HOPS (Croatian Transmission System Operator) and Uprise d.o.o., and tells the story of designing and building OPFP, a new optimization-based congestion relief system currently being built and integrated into HOPS's power system management platform. The project is being delivered by a consortium led by Adnet d.o.o., responsible for the platform, IT infrastructure, and system integration, with Uprise providing the AC/DC grid optimization module at its core.

Tin Bobetko, Managing Director**, Uprise Ltd**

Ana Kekelj, Head of SCADA/EMS Department**, HOPS**

Notes:

11:10 – 11:30

Secure Collaboration Practices for Open Source Energy Models

Open-source energy modelling tools have matured rapidly in recent years, yet many organisations still hesitate to adopt them as mainstream infrastructure. Common concerns include long-term maintainability, governance, and security, often driven by the misconception that open source is inherently less secure than proprietary software. In practice, open-source development can support strong security outcomes when responsibilities are clearly defined and when a strict separation between publicly developed code and private, protected code & data is maintained.
This talk explores what it takes to move open-source software from promising prototypes to reliable, industry-grade tooling. It focuses on practical collaboration patterns that reduce duplication and maintenance overhead, using the well-established concept of a soft-fork: a development approach that preserves alignment with upstream projects while enabling private organisation-specific extensions, ranging from private and protected code to data. Soft-forks allow teams to benefit from upstream innovation, avoid long-lived divergence, and minimise painful merge conflicts.
Drawing on lessons from real-world energy system modelling work, the presentation highlights best practices for versioning, security-aware development workflows, and collaboration. The goal is to show how open-source ecosystems can scale into dependable foundations for operational planning, research, and decision-making.

Marta Frysztacki, Co-Founder, Head of Energy System Modeling**, Open Energy Transition (OET)**

Notes:

11:30 – 12:00

Panel Discussion

Notes:

12:00 – 13:00

Lunch Break & Networking

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Conference will break into 3 Tracks

13:00 – 15:00

PSE Track – Tools for Transformation: Open Source and Proprietary Models in the Energy Transition

Planning the energy transition requires access to coherent data and reliable analytical tools that support optimal decision-making across multiple levels – from the national energy system, through the municipal sector, down to individual households. This session addresses key challenges related to modelling the energy transition, including data quality and consistency across different governance levels, as well as uncertainty in modelling assumptions. Drawing on the authors' Zefir models, the session presents practical experience with the use of open-source tools at both national and local scales. The workshop concludes with a discussion on model transparency, data openness, and the relationship between open-source solutions and proprietary software.

13:00 – 13:10 **PSE Strategy to 2040: The Role of the TSO in Shaping the Energy Transition**

Robert Tomaszewski, Director of Strategy Department**, PSE**

Aleksandra Gawlikowska-Fyk, Deputy Director, Strategy Department**, PSE**

13:10 – 13:20 **Modelling and Optimisation Challenges: How to Coherently Design the Transition at Different Levels (Zefir: national, municipal, household)**

Karol Wawrzyniak, Deputy Director of National Center for Energy Analysis**, PSE**

13:20 – 13:45 **Modelling the national energy mix using open-source tools in the early development phase – the perspective of a Zefir national model user**

Jędrzej Wójcik, Power Program Lead, **Forum Energii**

13:45 – 14:00 **The local dimension of the energy transition: district heating and cost optimization for municipalities**

Maksymilian Grab, Chief Specialist, **PSE**

14:00 – 14:15 **The local dimension of the energy transition: local balancing areas as an innovative approach to matching energy supply and demand**

Sławomir Walkowiak, **PSE**

14:15 – 14:30 **Energy transition in my home: optimising investments in energy and heating technologies at the household level**

Karol Pilot, **PSE**

14:30 – 15:00 **Workshop discussion with all participants**

PSE

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

13:00 – 15:00 Gurobi Track: Optimization Deep Dive

13:00 – 13:30 Explainability in Optimization – Ensuring Results are Transparent, Interpretable, and Defensible

As optimization systems play an increasingly central role in decisionmaking, the demand for transparent, interpretable, and defensible results has become critical to building trust. This talk presents practical strategies for embedding explainability into optimization workflows—from clarifying model assumptions and constraint logic to effectively communicating objective tradeoffs, sensitivities, and scenario impacts in ways stakeholders can readily understand. We also highlight several lesserknown Gurobi features that can help practitioners and decisionmakers strengthen confidence in optimization outcomes, enhance adoption, and ensure that resulting decisions remain accountable and aligned with both business objectives and application specific KPIs.

Christine Tawfik, Optimization Engineer, **Gurobi Optimization**

13:30 – 14:00 Explainability in Optimization – Ensuring Results are Transparent, Interpretable, and Defensible

Better performance, both regarding run time and solution quality, may be obtained by considering the best scaling choices during the model formulation process. After discussing suitable background information, this presentation will consider scaling strategies for model creation, including proper choice of units of measurement and alternate formulations to preempt numerical problems. Furthermore, a new open-source scaling package will be presented.

Vassilios Yftanis, Optimization Engineer, **Gurobi Optimization**

14:00 – 14:30 Algorithmic Innovation for Energy Applications

Gurobi's performance improves and new features and algorithms are added with every release. We discuss the impact of Gurobi's development on applications commonly found in the energy sector. In particular, we discuss recent developments for MIPs, LPs, and MINLPs backed by internal benchmark results.

Robert Luce, Senior Director Optimization R&D, **Gurobi Optimization**

Jaromił Najman, Senior Software Developer, **Gurobi Optimization**

14:30 – 15:00 Ask Gurobi Experts and R&D

13:00 – 15:00 BmO Track - From Model to Impact
Turning Optimization into Business Action

Many optimization projects don’t fail because the math is wrong - they stall because results never translate into decisions. In this interactive workshop, participants will use Gurobot, Gurobi’s AI assistant, to move from a real-world problem description to a structured optimization approach, uncovering the gap between current practice and what is possible.

The second part focuses on making that impact real: identifying where projects falter, addressing stakeholder objections, and learning how to communicate results in a way that builds trust and drives adoption. Designed for practitioners, researchers, and solution providers alike, the session emphasizes practical insight and actionable takeaways to help turn models into decisions.

Frank Häger, Director Power & Utilities EMEA**, Gurobi Optimization**

Anna Collins, Optimization Strategist, **Gurobi Optimization**

Tim Reintgen, Account Manager Power & Utilities EMEA, **Gurobi Optimization**

15:00 – 17:00 Meet & Greet Networking Coffee

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

YOUR NOTES

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

DAY 1

Your Hosts

Frank Häger • *Director Power & Utilities Europe, Gurobi Optimization*

Frank started his career in Optimization and Decision Management in 1998 at ILOG, continued at FICO from 2010 to 2016. In 2026 he anchored at Gurobi and is now Director for the European Power & Utilities activities at Gurobi Optimization. Frank is passionate about helping his clients to apply innovative Optimization Strategies for the Energy Transition.

Frank is a seasoned Sales Professional in the Software Industry for Enterprise Decision Management, focusing on Optimization and Prescriptive Analytics.

His Sales Motto is: I help to buy! Frank lives in the Hamburg area in Germany.

Michał Kłos • *Director of NCAE (computation methods development), PSE*

Michał Kłos heads computational methods development team at PSE S.A., Poland's transmission system operator. His work sits at the intersection of mathematical modeling, optimization, and the practical headaches of implementing EU energy regulations — turning complex policy into working algorithms. Some of those algorithms are already in the field: he led development of the clustering method used in the first Bidding Zone Review, and designed emergency DSR algorithms for procurement and dispatch. Before PSE, Michał spent 12 years as a researcher and consultant at the National Centre for Nuclear Research. He holds a degree in Computational Physics from Jagiellonian University, has authored over a dozen scientific publications, and is a regular contributor to the European Energy Markets conference community.

Lennart Lahrs • *Senior Technical Account Manager • Gurobi Optimization*

Lennart holds MSc degrees from RWTH Aachen University and KTH Royal Institute of Technology, with a focus on electrical engineering and operations research. Previously, he worked in software development and energy system research as part of agile teams. Within research contexts, Lennart applied discrete optimization to machine operations, fleet management and energy system design. Outside of work, Lennart enjoys sailing, cycling, and cooking.

Opening Remarks

Thomasz Sikorski • *Vice President, PSE*

Graduated from the Electronics and Information Technology Faculty of the Warsaw University of Technology at which he became M.Sc. in 1994 and the Doctor of Technical Sciences in 1999.Since 1999 associated with PSE S.A. Until 2015, he was involved in the designing and implementation of mechanism for balancing the Polish power system. From 2016, as the Vice-President of the Management Board, he supervised managing the operation of the national power system, providing transmission services and international cooperation. From January 2023 to March 2024, he served as President of the Management Board of PSE S.A.Member of the Management Board of PSE S.A. since December 31, 2015.

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Keynote

Tim Schittekatte • *Senior Director; Part-time Professor, FTI Consulting; Florence School of Regulation*

Tim Schittekatte is a Senior Director at FTI Consulting in London. At FTI, Tim leads projects related to electricity market design, network regulation, energy market modelling for clients in the UK, EU, and North America. He is also a part-time professor at the Florence School of Regulation where he directs the "Evolution of Electricity Markets in Europe" course. Prior to joining FTI, he was a Research Scientist at the MIT Energy Initiative and Senior Lecturer at the MIT Sloan School of Management where he taught the graduate course "Engineering, Economics and Regulation of the Electric Power Sector". He holds a PhD in energy economics from Paris-Sud XI and graduated as an engineer from Ghent University.

Session – Energy First

Unlocking Untapped Value for TSOs

Session Host:

Robert Tomaszewski • *Director of Strategy Department, PSE*

Philipp is a Senior Scientist for Operations Research at Fraunhofer IEE and the University of Kassel, leading the Method Development Team in the Energy Economics and System Analysis Department. Researching advanced and scalable optimization methods for design and operation planning problems, his work lies at the intersection of energy systems, optimization, machine learning, economics, and game theory. He received his doctorate (Dr.-Ing.) from the University of Kassel.He has also been a Visiting Research Scholar in the Computer Science Department at Princeton University and the Department of Electric Energy at NTNU

Speakers:

Ksenia Tolstrup • *Director Technical Advisory, Magnus Energy (NL)*

Philipp is a Senior Scientist for Operations Research at Fraunhofer IEE and the University of Kassel, leading the Method Development Team in the Energy Economics and System Analysis Department. Researching advanced and scalable optimization methods for design and operation planning problems, his work lies at the intersection of energy systems, optimization, machine learning, economics, and game theory. He received his doctorate (Dr.-Ing.) from the University of Kassel.He has also been a Visiting Research Scholar in the Computer Science Department at Princeton University and the Department of Electric Energy at NTNU

Swantje Möhle • *Energy Modeling Engineer, Austrian Power Grid (APG)*

Swantje holds a MSc in Physics from the University of British Columbia in Vancouver, Canada. After completing her studies, she spent two years at Schneider Electric North America working on complex power monitoring systems. Since May 2024, Swantje has been working as an Energy Modeling Engineer at the Austrian Power Grid (APG) TSO where she is a developer on the PyPSA-TSO Model, focusing on cross-sector energy system optimization and scenario building.

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Endika Urresti Padron *• Expert • PSE*

Endika Urresti Padrón is an optimization and modelling expert at PSE, Polskie Sieci Elektroenergetyczne S.A., the Polish Transmission System Operator. Over nearly a decade, he has been deeply engaged in the energy sector, collaborating extensively with the Polish TSO (PSE), DSOs, technical universities, and utilities. His work focuses on developing tools for power system and energy market analysis through optimization techniques and High-Performance Computing (HPC) infrastructure. Endika's professional journey includes roles as a project manager and researcher at the National Centre for Nuclear Research (NCBJ), Poland's largest research institute, within the Interdisciplinary Division for Energy Analyses (IDEA). Regarding his projects, he contributed to the design of the new Polish balancing market optimization engine, which has been operational since June 2024.From 2018 and 2020, Endika led two Horizon 2020 (H2020) research projects funded by the European Commission – EU-SysFlex and OneNet—on behalf of NCBJ. These projects aimed to develop optimization algorithms for cross-border remedial actions among different TSOs and TSO/DSO coordination mechanisms, enabling DSO units to participate in the balancing market without compromising the integrity of DSO networks. Endika has authored several publications on topics such as risk management in power system operations using dynamic simulations and enhancing system resilience through cascade simulations. Additionally, he contributed to creating a transmission expansion planning tool for PSE, an advanced optimization tool incorporating features like storage device integration.

Manuel Ruiz *• Advanced Expert in Decision making• RTE*

Manuel achieved his Thesis under CIFRE agreement: Industrial application in food manufacturing. Design and development of an optimization engine to solve non convex quadratically constrained quadratic problems. Internship in the innovation and research department of the SNCF: Development of a scheduling module that integrates into a planning tool for ultrasound auscultation machine rounds. Internship at Gerad (Study and Research Group in Decision Support), Montreal, Canada: Development of an application allowing the exact and automatic classification by the column generation algorithm. Working in power and energy system for ten years with RTE, his strong knowledge in operational research, mathematical programming and software implementation help him to contribute to the design of RTE's new decision-making tools. Specialties: Global Optimization, Combinatorial Optimization, Power systems, Stochastic optimization

---

Nico Westerbeck *• Software Architect • 50Hertz Transmission GmbH*

Nico Westerbeck is the Architect and Technical Lead behind the Elia Group ToOp project. Using his experience in accelerated computing, reinforcement learning and software design he drives ToOp to become the first industrialized Topology Optimization solution at a major TSO. Through an open-source mentality and regular scientific publications, he aims to advance not only the in-house product but the field as a whole.

Organizer Contacts:
Content Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Session: Optimization first

When Operational Responsibility Demands Optimization

Spyros Chatzivasileiadis • *Professor, DTU - Denmark Techical University*

Spyros Chatzivasileiadis (S'04, M'14, SM'18) is a Professor at the Technical University of Denmark (DTU). He has served as the Head of Section for Power Systems at the DTU Department of Wind and Energy Systems until 2025. Before joining DTU, he was a postdoctoral researcher at the Massachusetts Institute of Technology (MIT), USA and at Lawrence Berkeley National Laboratory, USA. Spyros holds a PhD from ETH Zurich, Switzerland (2013) and a Diploma in Electrical and Computer Engineering from the National Technical University of Athens (NTUA), Greece (2007). He is currently working on trustworthy machine learning for power systems, quantum computing, and on optimization, dynamics, and control of power systems. Spyros is the recipient of an ERC Starting Grant in 2020 and an ERC Proof of Concept in 2025, and has also received the Best Teacher of the Semester Award at DTU Electrical Engineering. He is a Senior Editor of IEEE Transactions on Power Systems.

Fabrizio Lacalandra • *Technical Secretariat of the Energy Division • Italian Regulatory Authority for Energy, Networks and Environment (ARERA), National Grid*

Fabrizio is an electrical engineer and applied mathematician with 25+ years of experience in mathematical modeling and optimization, mainly in the energy sector. He works in the Technical Secretariat of ARERA's Energy Division, where he has contributed to regulation on re-dispatching and balancing, including as co-author of Italy's Integrated Dispatching Regulation (TIDE) introduced in 2023. His expertise covers optimization, forecasting, classification, and simulation, especially for electricity and gas markets.

He has also developed models for portfolio optimization, risk management, asset allocation, and logistics, and has held managerial roles in Italy and abroad leading teams on mathematical modeling and strategic consulting projects. He collaborates with researchers from the University of Pisa, CNR-IASI, and ZIB on mixed-integer and robust optimization, forecasting, machine learning, risk modeling, and simulation. He is co-author of scientific publications, has presented at international conferences, and reviews for major journals in operations research and power systems.

Antonio Frangioni • *Professor • University of Pisa*

Antonio Frangioni is Full Professor at the Department of Computer Science of the University of Pisa since 2012, after having been Associate Professor, Assistant Professor and Ph.D. Student at the same place. His main research interest is the analysis, development, implementation and testing of solution approaches for large-scale structured optimization problems at the interface between continuous and combinatorial optimization, with emphasis on (re)formulation techniques to expose and exploit valuable structural properties, and their real-life application in several fields (energy, transportation, telecommunications, ...) He is also interested in the numerical analysis, computer science, artificial intelligence and machine learning issues arising within these solution approaches and, vice-versa, in the use of mathematical programming techniques in these disciplines.

Pascal Van Hentenryck • *Head of AI Innovation Lab• Gurobi Optimization*

Dr. Pascal Van Hentenryck works at the intersection of AI and Optimization, with applications in energy, healthcare, logistics and supply chains, manufacturing, and transportation. He developed innovative optimization systems, including CHIP and OPL which have been in commercial use for several decades. Pascal pioneered what is now known as constraint programming, and has made seminal contributions to global, stochastic, and combinatorial optimization. His recent work focuses on AI for Optimization, to bring orders of magnitude speed-ups to solving optimization problems. Pascal is a AAAI and INFORMS fellow, and the recipient of two honorary degrees and numerous research and teaching awards. Pascal used to play soccer competitively, is an avid runner, and likes to travel the world with his family to discover new cultures and their history.

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Moderated Closing Session: Final Keynote & Panel Discussion

Session host:

Aleksandra Gawlikowska-Fyk • ***Deputy Director, Strategy Department • PSE***

Aleksandra is a Deputy Director in the Strategy Department, which developed the new PSE Strategy to 2040. She is currently responsible for leading strategic projects at PSE, including the "Electricity Market Roadmap." Previously, she headed the "Power Sector" programme at the renowned Polish think tank Forum Energii. Her earlier professional experience includes roles at the Energy Regulatory Office (URE) and the Polish Institute of International Affairs (PISM). She holds a PhD in Economics and an M.A. in Administrative Law.

Marius Schrade • ***Expert Market and System Operations• 50hertz Transmission GmbH***

Marius Schrade has been a European electricity markets and system operations expert at 50Hertz, a German transmission system operator, since 2019, where he focused on regional and pan-European electricity market integration projects within the system operations department. He is co-editor of the book "European Electricity Market Coupling – A Practitioner's Guide". Before joining 50Hertz, he studied European Economics and holds a Double Degree from the universities of Maastricht in the Netherlands and Louvain-La-Neuve in Belgium.

YOUR NOTES

DAY 2

Session: Making Optimization Work

Xavier Nodet • *Senior Product Manager, Optimizer • Gurobi Optimization*

Xavier Nodet is the Product Manager for Gurobi Optimizer. Since he received his diploma in Computer Science and Operations Research from Université Pierre et Marie Curie, Paris, Xavier has been working in the optimization field. Xavier joined Gurobi as the manager of the Gurobi Optimizer team. Prior to joining Gurobi, he was the Development Manager for IBM ILOG CPLEX Optimization Studio, and the manager of the CPLEX Development team. Before that, he was a consultant, a consulting team lead, a Development Engineer and a Project Manager at ILOG and then IBM. When he's not with his family, Xavier loves to sing with the Choeur Région Sud, or drive his motorcycle through beautiful sceneries.

Szymon Kitowski • *Optimization Expert • PSE*

Szymon has a background in computer science, with a focus on optimization and computational methods. For over ten years, he worked at the Polish National Centre for Nuclear Research, where he developed advanced computational and optimization solutions for the energy sector.

Currently, he works at PSE S.A. as an Optimization Expert, focusing on the optimization of power system operations and the Balancing Market. His work bridges theoretical optimization approaches with real-world implementations in a transmission system operator environment.

Rafał Dzikowski • *Optimization Expert • PSE*

Rafał Dzikowski, PhD, is an optimization expert at PSE Innowacje company, with the academic background in power engineering. Over the past nine years, he has participated in and led multiple projects focused on developing optimization tools for Polish TSO, PSE. During this time, he has gained hands-on experience across nearly every stage of optimization projects: from gathering business requirements, designing architecture, preparing mathematical formulations and documentations, defining interfaces, implementing code, testing, to deploying solutions to production environments and providing maintenance.

Tin Bobetko • *Managing Director • Uprise Ltd*

Tin Bobetko is the Managing Director of Uprise d.o.o., where he leads the development and delivery of digital optimization solutions for the European energy sector. Since joining Uprise, he has managed and delivered a range of complex projects at the intersection of power system operations and ICT implementation, including requirements engineering and consultancy for ROSC process implementation, management of pan-European Common Grid Model programme local implementation, and project management across multiple RSC and TSO-facing initiatives with focus on capacity calculation and system operation.A Master of Electrical Engineering from the University of Zagreb, Tin began his career as a power system operator and later served as Head of the Regional Power System Control Centre at HOPS, where he led power system planning, security analysis, and SCADA implementation. He subsequently spent several years at TSCNET Services GmbH in Munich, progressing from TSC Operator through Business Implementation Manager to external consultant, managing the design and go-live of several services, from Outage planning to Common grid model. This combination of hands-on control room experience, deep requirements engineering expertise, and a track record of delivering ICT solutions in live TSO environments gives Tin a distinctive perspective on what it actually takes to make optimization work in practice.

Organizer Contacts:
Content Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Ana Kekelj • *Head of SCADA/EMS department • HOPS*

Ana Kekelj has been employed at the Croatian Transmission System Operator since 2001, where she has built a career spanning more than two decades in the field of control systems and energy management systems. She graduated from the Faculty of Electrical Engineering and Computing with a degree in Industrial Electronics, and at the same faculty she also earned a Master of Science degree in Computer Technologies, with a focus on harmonization of data models in power system processes.She currently works as the Head of Energy Management System (SCADA/EMS) department, which includes coordinating the upgrade and maintenance of SCADA/EMS systems, including optimization functions such as Voltage Var Control and Security Constraint Redispatch.She is also the project manager of the EU funded GreenSwitch project at HOPS, within which the implementation of a system for optimizing remedial actions to alleviate congestion is currently underway.

Martha Frysztacki • *Co-Founder, Head of Energy System Modeling • Open Energy Transition (OET)*

Martha Frysztacki is Co-Founder of the non-profit organisation Open Energy Transition (OET), founded in 2023, where she serves as Head of Energy System Modelling. She oversees multiple modelling teams and advises on projects supporting the adoption of open-source approaches in grid planning and policy processes. Her work focuses on advancing transparent, reproducible, and policy-relevant energy modelling, particularly in collaboration with regulators, TSOs, and other institutions shaping the energy transition.She holds a PhD in energy system modelling from the Karlsruhe Institute of Technology (KIT), completed under the supervision of Prof. Tom Brown, with a focus on spatial resolution in electricity system optimization models. During her doctoral work, she contributed to the development of the open-source framework PyPSA, which forms a core foundation of OET's work today.

PSE Session: Tools for Transformation

Open Source and Proprietary in the Energy Transition

Karol Wawrzyniak • *Deputy Director of National Centre for Energy Analyses • PSE*

Karol stands at the forefront of blending scientific inquiry with practical applications in the energy sector at PSE. He is managing teams responsible for: Planning transformation processes at the national, city, energy community, business and household levels. Developing a toolbase, including mix models at the national, local government, household and business levels. Developing models that integrate multiple sectors - sector coupling (including electricity, heating, and transport). Preparing and parameterizing models necessary for planning transformation processes in the field of distributed energy resources (DER) and subsequently operationalizing these processes. Preparing regulatory proposals. Quantitative assessment of the effects of regulations in the field of distributed energy resources (based on models).

Jędrzej Wójcik • *Power Program Lead • Forum Energii*

Jędrzej Wójcik has 15 years of experience in preparing sector-specific and macroeconomic analyses and presentations on the economies of Poland and Russia. He has managed analytical support projects focused on Eastern European markets. In addition, he has 6 years of experience working in an international environment, supporting investment and trade relations.

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Maksymilian Grab • *Chief Specialist • PSE*

Maksymilian enjoys applying analytical and interpersonal skills acquired in academia to real-life problems in critical industrial systems. His professional career resides at the edge of two worlds: one of technical challenges in mathematical modelling, the other - as demanding but even more rewarding - of interpersonal relationships: facilitating work of a team as a project manager. PhD in computer-aided theoretical mathematics. Even though work with abstract concepts was always enticing, creating and interacting with computer simulations finally his attention and he decided to move to industry. Besides rigorous training in problem-solving my teachers and colleagues helped him to develop patience, curiosity and cooperation which he finds invaluable outside academia. Interacting with other people is an important part of his professional journey as I am trying to build a supportive environment for members of his team, understand the needs of business partners and communicate clearly with stakeholders and regulators. On the other hand he also finds satisfaction in picking up technical problem-solving challenges if there is both occasion and the need to do so.

Karol Pilot • *Specialist • PSE*

Karol is an optimization and software development expert with professional experience at the National Centre for Nuclear Research (NCBJ) and Polish Power Grids (PSE S.A.). He brings extensive practical experience in modeling and optimizing energy systems across multiple scales — from national and city-level power systems to individual households. His current work focuses primarily on advanced residential energy modeling, combining optimization methods with real-world implementation.

Gurobi Session: Optimization Deep Dive

Christine Tawfik • *Optimization Engineer • Gurobi Optimization*

Christine is an Optimization Engineer, in the Gurobi Expert team. She holds a PhD in Economics and Management Sciences from the University of Liège (Belgium), where her work focused on network pricing and design optimization problems for logistics applications through extending game theoretic models and designing approximate solution algorithms. She has an academic experience through her postdoctoral work at Zuse Institute Berlin, where she led the „Sustainable Energy Planning" research group, handling collaborations within the district heating sector. She also worked in the steelmaking industry, where she had the opportunity to collect both consultancy and professional software development experience for nearly two years.

Vassilios Yfantis • *Optimization Engineer • Gurobi Optimization*

Vassilios Yfantis obtained a BSc (2012-2015) and an MSc (2016-2018) in chemical engineering from the Technical Universities of Berlin and Dortmund respectively before pursuing a PhD at the Technical University of Kaiserslautern. His work focused on mixed-integer programming-based production scheduling and on distributed optimization. Additionally, he has experience in academic teaching of various disciplines, e.g., mathematics, optimization, process control and logistics.

Organizer Contacts:
Content Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Robert Luce • *Senior Director Optimization R&D • Gurobi Optimization*

Robert is an experienced researcher in applied mathematics, and author of numerous publications in the fields of numerical linear algebra and optimization. He holds a Ph.D. from Technical University of Berlin.

Jaromil Najman • *Senior Developer, Gurobi Optimization*

Jaromił Najman obtained his M.Sc. in Mathematics at RWTH Aachen University. He did his Ph.D. at the Institute for Process Systems Engineering (AVT.SVT) in Aachen in nonlinear programming, in particular deterministic global optimization.

He is one of the two main developers of the open-source software MAiNGO. During his free-time, Jaromił likes to go rock climbing or play (board) games with his family and friends.

BmO Session – From Model to Impact

Turning Optimization into Business Action

Anna Collins • *Optimization Strategist • Gurobi Optimization*

Dr. Anna Collins holds a Ph.D. in Artificial Intelligence and Optimization from King's College London, where her research focused on mathematical programming for complex planning problems. She's passionate about making optimization accessible — whether by helping industry teams solve real-world problems with math, or guiding researchers as they scale up from theory to application. Before joining Gurobi, she worked at a digital health startup, where she applied advanced modeling techniques to clinical and operational challenges in fertility care.

Tim Reintgen • *Account Manager Power & Utility EMEA • Gurobi Optimization*

Tim Reintgen is an Account Manager at Gurobi Optimization, focusing on the Power & Utility sector across Europe. He works closely with utilities, system operators, and energy innovators to support go-to-market initiatives, foster community exchange, and help organizations translate optimization capabilities into tangible business and operational impact.He collaborates with technical teams, business stakeholders, and decision-makers to bridge the gap between mathematical models and real-world adoption. His work centers on enabling teams not only to build better models, but to ensure those models are understood, trusted, and ultimately used in practice.

Organizer Contacts:
Content — Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization — Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Your Notes

Organizer Contacts:
Content Frank Häger, Director Energy, +49-173-6655444, haeger@gurobi.com
Organization Despina Jegeni, Event Marketing Manager, despina.jegeni@gurobi.com

Contributing Organizations

(as of April 17)

PSE Polskie Sieci Elektroenergetyczne

Gurobi®

HOPS

FTI CONSULTING™

uprise

MAGNUS energy

Rte Le réseau de transport d'électricité

50hertz | Elia Group

DTU

OET Open Energy Transition
from the creators of PyPSA meets Earth

APG

Forum Energii

Themes:

The Evolving Role of Optimization in Market Design and Regulation

When Operational Responsibility Demands Optimization

Optimal Topology Switching (OTS): engineered, validated, and embedded into operational workflows

Optimization – Unlocking Untapped Value for TSOs

Making Optimization Work – Robustness, Integration & Ownership

Gurobi Solver Deep Dive

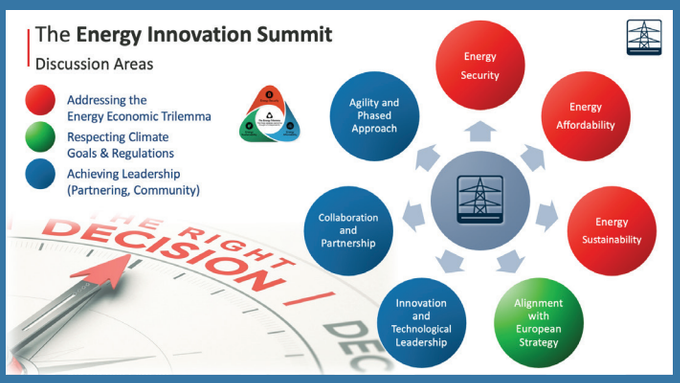
Energy Innovation Summit 2026

21/22 April 2026

Arriving to Warsaw on April 20 lets you conveniently experience the early Tuesday start.

Konstancin (Poland), a beautiful location...

to conduct discussions that matter most:



Why This Summit Matters

Europe's power systems are entering a phase where **complexity, scale, and interdependence exceed what traditional planning and operational approaches can reliably manage**. Decisions increasingly span multiple time horizons, voltage levels, market layers, and national borders - while expectations for security, affordability, and sustainability continue to rise.

Across Europe, **Modeling and Optimization are becoming the backbone of how these decisions are prepared and justified**. Not as isolated tools, but as integrated decision infrastructure supporting grid expansion, system operation, market design, and resilience planning.

This 6th edition of this Summit brings together European TSOs, leading researchers, and technology experts to exchange experience on how optimization-based decision support is actually used today - where it delivers value, where it struggles, and what it takes to make it trustworthy, scalable, and sustainable in real organizations.

Rather than focusing on theory or product demonstrations, **the Summit creates a shared space to discuss**:

- how advanced models and optimization methods connect to **operational responsibility**,
- how **AI** and **learning-based approaches** extend - but do not replace - rigorous system modeling,
- how **trust, transparency, and explainability** determine adoption in control rooms and planning departments,
- and how organizations evolve from individual models to **long-lived decision support systems**.

The two-day structure reflects this intent. It is a practitioner-level forum for European power-system leaders who are building the analytical foundations of the energy transition - and who want to learn from peers facing the same complexity, constraints, and responsibilities.

Contact

Frank Häger
Director Power & Utilities
+49-173-6655444
haeger@gurobi.com
www.gurobi.com

Registration

Event Video (Youtube)

Gurobi®

PSE
Polskie Sieci Elektroenergetyczne