

ECEMP 2026

Climate Change, Energy Security and Competitiveness: Modelling an energy system under stress

ECEMP 2026 is a two day hybrid event in Brussels that serves as a meeting point to share and discuss the latest research trends and collaborations in policy-relevant modelling that go beyond the energy system on its own, including competitiveness, strategic resources, policies and social justice.

21 October	Hybrid room 1	Hybrid room 2	Online room 3	Online room 4
08:30 - 09:30	Arrival			
09:30 - 10:00	Welcome			
10:00 - 11:30	Plenary I: Renewable energy as the cornerstone of security of supply, competitiveness and climate policies			
11:30 - 12:00	Coffee Break			
12:00 - 13:00	Social justice and fair transition	Combining forces, model linking for more robust energy system	Transport decarbonisation and infrastructure	Environmental implications on the economy
13:00 - 14:00	Lunch			
14:00 - 15:30	Climate resilience, security of supply and extreme events	Industrial competitiveness in the net-zero transition	Energy security and geopolitical risks	Modelling implications for informed energy system analysis
15:30 - 16:00	Coffee Break			
16:00 - 17:30	Plenary II: Robust technology portfolios for a resilient future energy system			
17:30 - 19:00	Free time			
19:00 - 21:00	Dinner			

22 October	Hybrid room 1	Hybrid room 2	Online room 3	Online room 4
08:30 - 09:00	Arrival			
09:00 - 10:30	Meet the mopo project	Meet the iDesignRES project	Meet the ReLIFE project	
10:30 - 11:00	Coffee Break			
11:00 - 12:30	The broader impact of decarbonisation policies	Building decarbonisation and renovation	Hydrogen and Sector coupling	Circular economy and material transition
12:30 - 13:30	Lunch			
13:30 - 14:30	Open Science, model evaluation and transparency	Carbon removal technologies and pathways	Climate ambition assessment	Impact of industrial changes on the energy system
14:30 - 15:00	Coffee Break			
15:00 - 16:30	Meet the EU - China BRIDGE project	Meet the EU - India modelling cooperation	Meet the EU - Africa projects	
16:30	Closing			

Legend	Policy	Economy	Social justice	Resources	Modelling	Other sectors
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Welcome

21 October (AM) hybrid Plenary Room

A warm welcome by the hosts of the ECEMP 2026 event.

1. Tars Verschelde, KU Leuven
2. Beatrice Coda, DG Research & Innovation
3. Vicky Pollard, DG CLIMA

Closing

22 October (PM) hybrid Plenary Room

1. Tars Verschelde, KU Leuven — end of ECEMP 2026
2. Pedro Crespo del Granado, NTNU — start of ECEMP 2027

Plenary sessions

21 October (AM+PM) hybrid Plenary Room

Plenary I: Renewable energy as the cornerstone of security of supply, competitiveness and climate policies: Overcoming barriers to increased levels of renewable energy

With RED III in place (42.5% RES target by 2030, with follow up via, amongst others, the Electricity Market Design Reform and the European Grids Package), this session looks forward toward the post-2030 RES framework. The discussion is centered around impact-of/barriers-to-be-overcome for increasing levels of RES from different lenses (policy, planning, regulatory, technical), and the connection to modeling endeavors and needs.

chair: Erik Delarue, KU Leuven

4. Derck Koolen & Sebastian Sterl, EC (DG ENER) — Renewables and electrification as drivers for competitiveness in the EU
5. Laura López, REE/ENTSO-E — Renewable Energy Beyond 2030: insights from the TYNDP 2026 Scenarios
6. Leonardo Meeus, Florence School of Regulation — Renewable energy as the cornerstone of security of supply, competitiveness and climate policies
7. Elis Nycander, SVK — Barriers to increasing levels of RES – A Swedish perspective
8. Riccardo Longo, WindEurope — From renewable targets to deployable pathways: a wind sector perspective

Plenary II: Robust technology portfolios for a resilient future energy system - From Energy storage to grid resilience

This session brings together modelling and industry perspectives on flexibility in a power system dominated by variable renewables, across all timescales from balancing within the hour to bridging prolonged periods of low renewable output. No single technology covers this range: batteries, long duration storage, hydrogen, demand-side flexibility and grids each address different parts of the problem. The discussion focuses on which combinations form robust portfolios, and what they imply for investment and security of supply.

chair: Pedro Crespo del Granado, NTNU

1. Konstantin Löffler, Siemens Energy — Securing the European energy future: Challenges and opportunities for the European energy system
2. Adriano Sciacovelli, DTU — From challenges to uptake: AVANGUARD's digital solutions for Long Duration Energy Storage
3. Pedro Crespo del Granado & Mostafa Barani, NTNU — PowerMAX: Maximizing Cross-Grid Integration and Optimization of Long Duration Energy Storage to synergize Revenue Streams
4. Hans Auer, TU Wien — Technology sourcing and availability for the energy transition in Europe

Project sessions

22 October (AM) hybrid

Meet the mopo project

Room 1

The [Mopo](#) project combines component tools producing input data to create model-ready datasets, scenario and workflow management, and medium and long-term energy system planning. The aim is to provide a user-friendly, open-source and validated set of tools to benefit decision-makers in network operation, industry and public authorities.

chair: Niina Helistö, VTT

1. Niina Helistö, VTT — Spine tools
2. Matti Koivisto, DTU — Component tools and data for pan-European energy system modelling
3. Tars Verschelde, KU Leuven — Ines tools
4. Alvaro Porras, EPRI — EuroSpine: An Open Pan-European Energy System Planning Framework using spine tools
5. Marit van Hout, PBL — Decarbonisation pathways of industrial clusters in the Netherlands and Belgium using spine tools
6. Diāna Žalostība, RTU — Baltic case study

Meet the iDesignRES project

Room 2

Meet the [iDesignRES](#) project Driving Europe's Renewable Uptake, iDesignRES offers state-of-the-art open-source toolboxes empowering public authorities and network operators to plan and optimise renewable energy systems from regional to European scales.

chair: Mostafa Barani, NTNU

1. Pedro Crespo del Granado and Mostafa Barani, NTNU — A CloudHub for Energy models, lets run models online and insights from Scenario Explorer
2. Mostafa Barani, NTNU — Insights on a multi-model analysis for integrating energy systems in the North Sea
3. Antonia Golab, TU Vienna — Intra-annual dynamics in spatial electricity pricing: Impacts on charging capacity utilization and spatio-temporal charging loads
4. Daniel Casar, TU Vienna — Narrowing the gap between ESOM shadow prices and observed European day-ahead markets: a constraint-based approach in PyPSA-Eur

22 October (AM) online

Meet the ReLIFE project

Room 3

A hands-on session to learn about the open-source ReLIFE platform with data and models for renovating single homes and national stock: EU-wide building-stock data, remote-sensing and synthetic-data methods, ISO 52016 dynamic energy simulation, multi-criteria and financial-risk models, all open source and exposed rather than a black box.

chair: Giulia Conforto, e-think

1. Simon Pezzutto, EURAC — Introduction to the ReLIFE Project
2. Giovanni Libradoni, EURAC — The data foundation
3. Daniele Antonucci, EURAC & Daniela Stoian, NTUA — The models behind the platform
4. Andres Garcia, CTIC — Platform & tools
5. Giulia Conforto, e-think & Patrick Thöni, EURAC — Hands-on: model your building
6. Giulia Conforto, e-think — Wiki & Training Materials

22 October (PM) hybrid

Meet the EU-China-Bridge project

Room 1

This session will explore pathways for reconciling industrial decarbonisation and competitiveness in Europe's transition to net zero. Drawing on scenario co-creation, global and sectoral modelling, and industry-focused analysis, speakers will present alternative technology pathways, a roadmap for the EU steel industry, and the employment impacts of the Carbon Border Adjustment Mechanism (CBAM) across energy-intensive sectors and key trading partners. The session will highlight the implications of these developments for Europe's industrial transition, trade relations and policy choices.

chair: Chun Xia-Bauer, Wuppertal Institute

1. Chun Xia-Bauer, Wuppertal Institute — Setting the scene
2. Sonja Sechi, E3M — Co-creation process for scenario development and first insights of the global models analysis
3. Maria Kannavou, E3M & Fanqi Vicky Jia, IIASA — Sectoral pathways to the EU's net-zero transition under alternative technology futures
4. Georg Holtz, Wuppertal Institut — A Roadmap for the EU steel industry
5. Ye Hang, Uni Birmingham — Employment impacts of the CBAM in energy-intensive sectors and key countries

Meet the EU-India Modelling cooperation

Room 2

Under EUCDs2, the modelling cooperation aims to deepen the collaboration with NITI Aayog, the premier policy think tank of the Government of India, particularly through greater exchange on how the complex and interrelated dimensions of the low-carbon transition are assessed and modelled. The session aims to identify priority themes for cooperation between EU and Indian modelling teams and enhancing collaboration among domestic institutions.

chair: Gabriele Wagner, GIZ

1. Vicky Pollard, European Commission DG CLIMA — Welcome and context
2. Venugopal Mothkoo, NITI Aayog & Anjali Jain Consultant, NITI Aayog — Scenarios towards Viksit Bharat and Net Zero
3. Open discussion
4. Oliver Fricko, IIASA — Low carbon modelling - India and EU collaboration under earlier India and EU cooperation projects
5. Open discussion
6. Jai Kumar Gaurav, EUCD2 — Key takeaways

22 October (PM) online

Meet the EU-Africa projects

Room 3

The session presents policy-relevant insights for the AU and EU extracted from national- and continental-scale modelling efforts as well as how they may be brought together to deliver sets of cross-scale and coherent messages for policy makers at different levels.

chair: Sebastian Sterl, DG Ener

1. Francesco Gardumi, KTH — introduction
2. Abdulrahim Shuaibu-Issah, AFRILABS — EMERGE: Roadmap for clean energy transition
3. Kanchi Gashaw, Veritas — OpenMod4Africa: Comparison of insights from national-scale analyses in Kenya, Ethiopia and Uganda and those of the African Continental Master Plan
4. Elias Kousoulos / Constantinos Taliotis, The Cyprus Institute — RE-INTEGRATE: Energy trade across Africa and Europe: long-term national investment and infrastructure pathways for electricity and natural gas
5. Panel discussion with
 - a. Alemayehu Woldeamanuel, WRI
 - b. Nadeem Goussous, IRENA
 - c. Samuel Opana, EAPP
 - d. Benard Wabukala, AISESA

Parallel sessions

21 October (AM)

Social justice and fair transition

hybrid room 1

chair: Erik Delarue, KU Leuven

1. Rafael Garaffa, JRC — Socio-economic implications of recurrent energy price shocks in the EU: the case of the Middle East crisis
2. Marianna Pozzi, Politecnico di Milano — Modelling the Social Climate Fund for a Fair Transition of Building Sector in Italy
3. George Xexakis, HOLISTIC SA — Democratic principles in the Shared Socioeconomic Pathways: narrative and quantitative analysis

Combining forces, model linking for more robust energy system

hybrid room 2

chair: Konstantinos Koasidis, NTUA

1. George Xexakis, HOLISTIC SA — A model-linking process informed by best practices in software engineering and open science
2. Konstantinos Koasidis, NTUA — The Revised NECPs Within the Context of Slowing Momentum in NDCs 3.0: Evidence from a Multi-Model Assessment
3. Paul Stegmann, TNO — The AMIGDALA framework: Integrated modelling of carbon-neutral and competitive pathways for Europe's energy-intensive industry

Transport decarbonisation and infrastructure

online room 3

chair: Alexander Hoogsteyn, KU Leuven

1. Francesco Sanvito, TU Delft — Coordinated planning of European charging infrastructure and energy system for optimal V1G and V2G deployment
2. Lorenzo Caravetta, POLIMI — A Two-Model Framework for Assessing the Robustness of Energy System Plans Under Uncertainty
3. Juan Manuel, University of Valladolid — Direct electrification and hydrogen-based pathways in EU passenger transport: Energy, environmental, and material implications

Environmental implications on the economy

online room 4

chair: Alexandros Nikas, NTUA

1. Alexandros Nikas, NTUA — Mapping channels and advancing modelling capacity to assess the environmental implications of trade and trade policy
2. Aleksander Grochowicz, DTU — Resilience metrics to guide back-up investments in the power system during extreme weather
3. Tinne Mast, VUB — Variable renewables fortify Ecuador's power system against recurrences of drought-driven energy crises

21 October (PM)

Climate resilience, security of supply and extreme events

hybrid room 1

chair: Konstantin Löffler, Siemens Energy

1. Gustav Resch, AIT — Towards a climate-resilient energy system planning – examples from Austria
2. Justinas Jasiunas, VTT — Broadening power system vulnerability assessment – start with weather variability
3. Matti Koivisto, DTU — Assessing Security of Supply in a Decarbonised European Energy System through Integrated Climate-Energy Modelling and Stress Testing
4. Ekaterina Fedotova, OET — Probabilistic Assessment of Optimal Microgrid Design under Multiannual Hydrological Variability

Industrial competitiveness in the net-zero transition

hybrid room 2

chair: Jelle Meus, KU Leuven

1. Álvaro Carbonell Rodríguez, JRC — The macroeconomic costs of labour market shortages in the EU
2. Negar Namazifard, VITO — Enabling competitive, climate-neutral and circular EU industries: The role of import strategies, grids, storage and sector coupling
3. Marc Vielle, ORDECSYS and EPFL — Reshoring of Manufacturing Industries, Environmental Impacts and Implications for the Climate–Trade–Industry Nexus – A model intercomparison exercise
4. Goyal Srishti, WSP — Climate and Industrial Policy in Europe's Low-Carbon Transition: Competitiveness and Regional Disparities

Energy security and geopolitical risks

online room 3

chair: Elise Chambard, KU Leuven

1. Nikos Kleanthis, UNIPi — Exploring the justice implications of alternative power sector transition pathways through bottom-up modelling and transformative scenario design
2. Bobby Xiong, TU Berlin — The cost of self-sufficiency: Robust energy system planning under prolonged transmission blackouts
3. Fatemeh Rostami, university college Cork — Assessing Ireland's Net-Zero Transition Under Geopolitical and Supply Chain Risks
4. Lukas Franken, TU Berlin — Accelerating fossil gas independence in Europe

Modelling implications for informed energy system analysis

online room 4

chair: Alexander Hoogsteyn, KU Leuven

1. Hayat Mekki, SEURECO — How Modelling Choices Shape the Distributive Effects of Carbon Pricing: Evidence from a Dynamic EU Model
2. Pernille Seljom, IFE — Balancing competing objectives in the low-carbon energy transition: Insights from modelling the Norwegian energy system
3. Lukas Karkossa, DTU — How Technology and Modeling Choices Shape European Wind and Solar Energy Droughts and Stress Events
4. Christina Tigka, NTUA — Bridging the gap between socio-technical realities and energy-climate-economy modelling in EU industrial transformation

22 October (AM)

The broader impact of decarbonisation policies

hybrid room 1

chair: Niina Helistö, VTT

1. Camille Van der Vorst, JRC — Investigating the energy security co-benefits of decarbonisation
2. Avgi Rousogiannaki, NTUA — Land-use and biodiversity impacts of European climate mitigation policies
3. Patrick Jürgens, Fraunhofer ISE — The European energy transition in the context of social and (geo)political scenarios
4. Ward Winters, KU Leuven — Economic implications of inter-farm wake losses

Building decarbonisation and renovation

hybrid room 2

chair: Pedro Crespo del Granado, NTNU

1. Ricarda Rosemann, PIK — Status Quo Bias in Homeowner's Heating System Choice: Results of a Building Stock Model
2. Parisa Rahdan, DTU — Identifying demand-side measures that matter most for Europe's energy transition
3. Moritz Wegener, JRC — Energy demand in the CETO2026 scenario
4. Juliana Barbosa, LNEG — Demand-side circular mitigation strategies for climate neutrality in Europe

Hydrogen and Sector coupling

online room 3

chair: Veis Karbassi, KUL

1. Meijun Chen, TU Delft — Global green hydrogen demand-supply match under various normative assumptions
2. Christos Koumparakis, E3M — Modelling hydrogen in sector coupled energy systems
3. Espen Flo, Sintef Energy Research — Hydrogen from Offshore Resources in the North Sea - Opportunities for Electrolysis and Hydrogen Storage at Sørlige Nordsjø II
4. Alaa AlQassabi, HBKU — The role of multi-model approach in shaping transition pathways

Circular economy and material transition

online room 4

chair: Marit van Hout, PBL

1. Margarita Efthymiadou, E3M — Circular Economy Pathways for Climate Mitigation in the German Chemical Sector
2. Patricia Fortes, LNEG, CENSE — Exploring New Levers for EU Decarbonisation: integrating circular economy and material dynamics into EU energy system modelling
3. Shuhaib Nawawi, IIASA — Narrow, Slow, and Close: Modelling circular economy pathways for Europe's building sector
4. Vassilis Stavrakas, UNIPi — Evidence-based renovation planning for municipalities: Bottom-up modelling of decarbonisation and affordability impacts in private multi-apartment buildings

22 October (PM)

Carbon removal technologies and pathways

hybrid room 1

chair: Flore Verbist, KU Leuven

1. Alberto Alamia, DTU — Beyond BECCS and DACCS: alternative carbon dioxide removal strategies for more competitive net-zero European energy system
2. Flore Verbist, KU Leuven — Carbon Dioxide Removal Integration into the EU ETS under Uncertainty
3. Anastasis Giannousakis, E3M — Exploring carbon dioxide removal pathways under near term and delayed climate action

Open Science, model evaluation and transparency

hybrid room 2

chair: Konstantinos Koasidis, NTUA

1. Will Usher, OET — Open TYNDP
2. Konstantinos Koasidis, NTUA — The value of interactive platforms for model documentation and result communication: the case of IAM PARIS
3. Stratis Alexandrou, NTUA — An ex-post evaluation of IAMs using data from the IPCC AR6 scenario database

Climate ambition assessment

online room 3

chair: Michael Oke, Federal Capital Territory Agricultural Development Programme

1. Maro Baka, WSP — The bumpy road to EU's net zero: Assessing the impacts of rolling back climate ambition
2. Michael Oke, Federal Capital Territory Agricultural Development Programme — Navigating the Energy Trilemma in Nigeria: A Systems Modelling Approach to Strategic Resource Management, Circularity, and Supply Security under Stress
3. Anastasios Karamaneas, NTUA — Navigating Greece's energy transition in the light of biodiversity and other spatial considerations

Impact of industrial changes on the energy system

online room 4

chair: Quentin Raillard-Cazanove, KU Leuven

1. Roelof Stam, TU Delft — Structural transformation or decline? Energy system implications of diverging European industrial futures
2. Muhammad Husnain Haider, Universitat Rovira i Virgili — Modelling the grid-relief threshold for residential PV-battery storage under policy and stress scenarios: a national assessment of 8,134 Spanish municipalities
3. Quentin Raillard-Cazanove, KU Leuven — When does industrial flexibility serve security of supply? A process-explicit adequacy assessment.