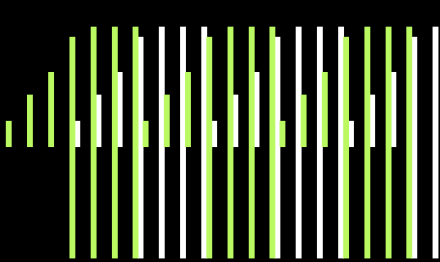


move
beyond.



SPITech



11th International Conference On Smart And Sustainable Technologies

Split - Bol // June 23-26, 2026

Special Session

Advanced Design and Retrofit Solutions for a Decarbonized and Climate-Resilient Built Environment under the New EU Policy Framework (EPBD, EED and RED)

ORGANIZERS



FABRIZIO ASCIONE
University of Naples
Federico II, Italy
CHAIR



CO-CHAIRS:



**AGIS
PAPADOPOULOS**
Aristotle University of
Thessaloniki, Greece



PARIS FOKAIDES
Frederick University,
Cyprus



**MARCOS EDUARDO
GONZALEZ TREVIZO**
Autonomous University
of Baja California, Mexico



SANDRO NIŽETIĆ
University of Split,
Croatia

CALL FOR PAPERS

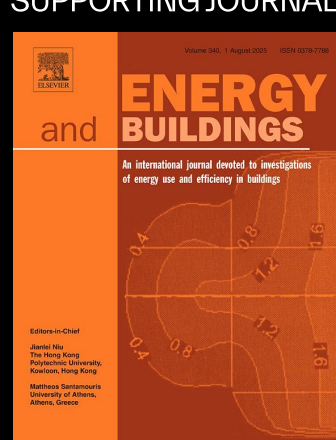
The decarbonization and climate adaptation of the built environment are central challenges for Europe and are increasingly shaped by the latest generation of EU regulatory frameworks, including the Energy Performance of Buildings Directive (EPBD IV – Directive (EU) 2024/1275), the Ecodesign Regulation, the revised F-Gas Regulation, the Energy Efficiency Directive (EED), and the Renewable Energy Directive (RED). Together, these policies establish an ambitious and interlinked roadmap toward a highly energy-efficient, low-carbon, and climate-resilient building stock, responding to accelerating climate change, growing energy insecurity, and social challenges such as energy poverty.

Despite more than two decades of regulatory action, buildings still account for approximately 40% of final energy consumption and a substantial share of greenhouse gas emissions in Europe. Monitoring by authoritative institutions (e.g., WMO, Copernicus, NASA) confirms a persistent increase in global and regional temperatures, accompanied by more frequent and intense extreme weather events. These trends exacerbate overheating risks in buildings and cities, strain energy systems, and challenge the adequacy of traditional design and retrofit approaches. While energy performance improvements have been progressively implemented, their effectiveness is often undermined by rising comfort expectations, increasing cooling demand, and the widespread deployment of energy-intensive technologies.

Within this context, updated EU directives emphasize a paradigm shift from incremental energy savings toward systemic decarbonization, electrification, renewable integration, demand reduction, and resilience-oriented design. EPBD IV introduces binding timelines for zero-emission buildings and deep renovation; the Ecodesign framework strengthens minimum performance requirements for building-related products; the F-Gas Regulation accelerates the phase-down of high-GWP refrigerants; the EED reinforces energy demand reduction targets; and the RED promotes on-site and district-level renewable energy deployment.

This Special Session aims to foster a multidisciplinary discussion on innovative strategies, methods, and technologies that align building design, retrofit, and operation with this evolving policy landscape. Contributions are invited on advanced building envelopes, passive and hybrid cooling solutions, low-impact HVAC systems, smart controls and building automation, renewable energy integration, occupant-centered approaches, and policy-driven assessment methodologies across building, district, and urban scales. Particular attention is given to retrofit solutions, climate adaptation, urban overheating mitigation, and socially inclusive pathways to decarbonization, supporting a just and resilient transition of the European built environment.

SUPPORTING JOURNAL:



ORGANIZING COMMITTEE:

- Margherita Mastellone, University of Naples Federico II, Italy
- Giama Efrosini, Aristotle University of Thessaloniki, Greece
- Muslum Arici, Kocaeli University, Turkey
- Teresa Iovane, University of Naples Federico II, Italy
- Aleksandar Anđelković, University of Novi Sad, Serbia
- Giuseppe Aruta, University of Naples Federico II, Italy
- Vlasta Zanki, University of Zagreb, Croatia
- Tomasz Cholewa, Lublin University of Technology, Poland
- Tamara Bajc, University of Belgrade, Serbia

FULL PAPER SUBMISSION:
February 20, 2026

SUBMIT PAPER HERE

Notification of acceptance:
April 17, 2026

Camera ready paper:
May 1, 2026

Visit our website for more information

<https://splitech.org/>