January 2023

BUILD UP

Newsletter











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Overview articles

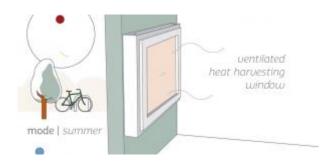
JANUARY TOPIC OF THE **MONTH:** Renewable heating solutions for existing buildings

Every month, BUILD UP highlights publications that are covering a specific topic. The topic of the month (TOM) for January is Renewable heating solutions for existing buildings. Our Editorial Board is eager to receive your discussion papers, news, and articles now. Become a contributor! In this edition of the newsletter you will also find some of the most relevant contents of the December's TOM: "Building envelope and facade technologies for efficient buildings".



Technical Article Performance of the main technologies demonstrated in the ENVISION project

Within the context of the ENVISION project, different technologies have been developed aiming to harvest energy while being integrated into the façade of buildings. These have been tested in a variety of demonstration sites with a monitoring phase of around one year in order to assess their performances. This paper reports their performance, focussing on solar façade collectors coupled with Heat Pumps and PV windows.



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Technical Article – Rethinking building roofs: aligning sustainability, environmental respect, and wellbeing

Are roof spaces well exploited? How do they contribute to the efficiency of buildings? This article proposes several ways of redesigning roofs to enhance sustainability parameters such as Renewable PV production, energy savings, thermal comfort, water use reduction and leisure areas.



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Technical Article - Plug-anduse renovation with adaptable lightweight systems

This article outlines the technical innovations developed by the H2020 PLURAL project (Plug-and-Use Renovation with Adaptable Lightweight Systems), that proposes prefabricated, modular, and adaptable lightweight façade systems for rapid renovation of existing buildings, providing highperformance, cost-effective, and fast renovation solutions.



News

Expert Talks - Uli Jakob

Uli Jakob, Honorary Professor at HFT Stuttgard and Managing Director of JER, speaks about renewable heating solutions for buildings.

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Expert Talks – Thaleia Konstantinou

Assistant Professor at the Department of Architectural Engineering and Technology (TU Delft), Thaleia Konstantinou talks about building envelope and facade technologies for efficient buildings.

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EUSEW 2023 is getting closer: keep an eye on the deadlines!

The time is getting shorter to play an active role during the European Sustainable Energy Week (EUSEW) 2023, that will take place in Brussels and online on 20-22 June 2023. Stay tuned and do not miss any of the deadlines to apply for the different calls (organisation of session, Awards, stand). Registrations to attend EUSEW 2023 will go live from mid-April.

20-22 JUNE 2023

EUROPEAN SUSTAINABLE ENERGY WEEK

Accelerating the clean energy transition – towards lower bills and greater skills

#EUSEW2023 ec.europa.eu/eusew

Call for BUILD UP Ambassadors

Our BUILD UP Ambassadors are the engine that expands the borders of our platform; high-ranking professionals who selflessly share their knowledge with our community and spread our values and mission nationally. Check the requirements to join our ambassador team!



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Athens is planning to rejuvenate its buildings' facades

Athens has developed a 'Façade' (Πρόσοψη) programme to renovate the facades of its buildings. The main difference of this programme compared to others in the EU is that the city is offering homeowners 100% of the funds required to do the work – to a maximum of 6,000 euros per building, and even more for protected buildings.



<u>more</u>

If most cars can tell us how much energy we're using, why can't our houses?

Despite the European-wide roll out of the Smart Readiness Indicator (SRI) – an instrument that assesses how close a building comes to being energy smart-, adoption has been happening at different paces. The attractiveness of digitalisation investments has proven to vary among geographies, and regional differences in regulation and markets stress inequalities.



A selection of top facades in 2022

The Architects Newspaper has selected innovative and successful facades of buildings that have been presented during 2022. The facades are made of different materials, such as terra-cotta, rammed earth and mass timber which offer different building envelope solutions based on the climate zones in which they are based.



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Practices

Renovation of old buildings to minimise the environmental impact

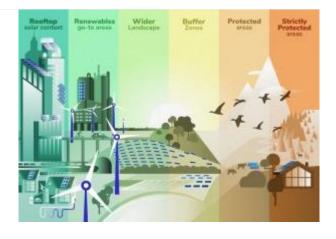
A comprehensive guide, results of a project called 'Mitigation of climate change in historic buildings' which was implemented with Croatia Green Building Council, explains how to make better use of old buildings to minimise their environmental impact and reduce their carbon footprint. The book also presents a tool which indicates the best solutions based on the conditions of buildings.



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Searching for space for naturepositive renewables

EU plans to expand renewables will reshape land use in Europe, decision-makers must develop strategic spatial planning to scale up renewable energy capacity in harmony with nature protection and local communities. For solar contexts, rooftops are the best solution, providing benefits both in terms of energy and environmental impact. Solar development integrated in



built environments should be prioritised and administrative barriers to installation should be removed.

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Energy rehabilitation of a social housing façade

This case study presents the energy rehabilitation of a facade of a social housing building located in Catalonia through the installation of an innovative, prefabricated, and modular facade system that integrates active and passive technologies and circular economy principles.



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Passive House residence in Roncg

These apartment houses in Roncq (Hauts-de-France) are Passive House certified. Their thermal envelope and mechanical systems have efficient energy consumption results. Moreover, the buildings recover energy from grey water.



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Explore

EASI ZERo Project: Envelope Material System with low Impact for Zero Energy Buildings

EASI ZERo proposes a global system to cut the environmental impact by rising the thermal performance of buildings' envelope by 20% with biosourced and recycled materials.



SUPERSHINE Project: Implementing the European Green Deal

The objectives and impacts of the SUPERSHINE project will assist and support the European Commission to implement the European Green Deal, paying particular attention to the renovation of social housing.



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Envola storage heat pump: a new product category

The Envola storage heat pump enables the world's first highly energy-efficient heating, cooling and ventilation system significantly reducing energy consumption and greenhouse gas emissions in Europe.

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SAFE-FACE Project: Innovative seismic-resilient façade designs

The EU-funded SAFE-FACE project will develop earthquake-proof sustainable facades for mid-rise and newly built residential and office buildings via sustainable techniques for integrating damage-control.



Webinar - Lightweight switchable smart solutions for energy saving glass facades

The webinar, hosted by BUILD UP, presented the main features of Switch2Save technology and its potential impact and introduced the Architectural Design Competition.

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Webinar - The Plug-N-Harvest solution enabling smart energetic renovations for different building cases

Moderated by Aranzazu Galán González, Senior Researcher at Université Libre de Bruxelles and BUILD UP's Editorial Board Member, and hosted by BUILD UP, this webinar presented material and outcomes from the H2020 Plug-n-Harvest project which has recently ended (November 2022).



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CinderOss - CINDERELA One-Stop-Shop service for sustainable urban construction

The CINDERELA Project has developed the CinderOSS tool, a One-Stop-Shop service representing a digital business environment and supporting new business models for a sustainable urban construction.



The BERLIN Smart Tool for building integrated energy systems design

The BERLIN Smart Tool, developed by University of Western Macedonia and within the BERLIN project, calculates the proper size and combination of photovoltaics and battery storage systems in order to reach self-sufficiency in buildings.



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Events

Heat Pump skills and competencies: Preparing for mass deployment

This event, which will be celebrated the 25th January, addresses the outcomes of the HP4ALL project. The ultimate aim is to develop a Mutual Recognition approach that is coupled with a relevant Competency Framework for the range of knowledge, skills and expertise required to ensure that the relevant HP technologies are installed to the highest quality as to make the maximum contribution towards the energy transition.



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Energy generation and storage technologies in buildings

Hosted and organised by BUILD UP on 26th January, this webinar will present two projects that explore technological solutions for heating/cooling coupled with renewables (SunHorizon and HAPPENING) and two projects that explore aspects of energy/thermal energy storage (MiniStor and ComBioTES).



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World Sustainable Energy Days 2023

The price crisis, multiplying signs of climate change, and threats to energy security urge us to act like never before. REPowerEU reflects this urgency and provides new momentum for the energy transition. In 2023, the World Sustainable Energy Days 28th February - 3rd March) show the critical role of the energy transition in securing our clean energy future and concrete policies, technologies, and markets to get us there.



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Switch2Save Architectural Design Competition

The Switch2Save Architectural Design Competition aims to collect design concepts of non-residential buildings (new or renovation projects), featuring glass facades, roofs, or large window to wall areas, in any climatic context. The challenge is to present a design concept in which there is an optimum exploitation of the Switch2Save EC/TC smart functionalities, supported by a clear energy saving concept towards meeting the EU energy saving targets for buildings, while considering occupants' comfort and wellbeing. The announcement of winners will be on May 2023.







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