

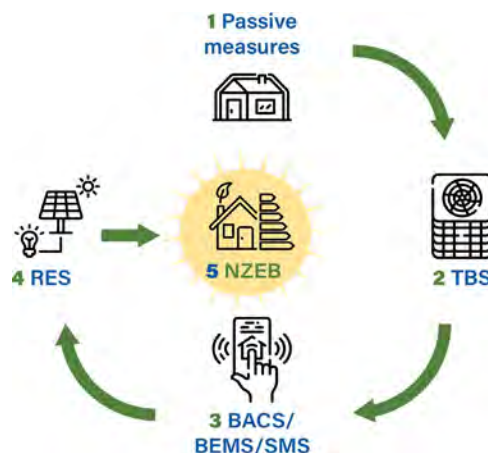


New Skills
for nearly
Zero Energy
Buildings

New Skills for Nearly Zero Energy Buildings (NS4nZEBs) is an EU-funded project within European Commission's LIFE programme. The objective of this project is to **update the skills** of all professionals involved in the design and implementation of nearly Zero-Energy Buildings.

The project aims to contribute to the European objective of reducing CO₂ emissions in all buildings by 2050. The **NS4nZEBs** project is carried out by partners from six countries: **TMK** (Belgium), **CISB** and **SEC** (Bulgaria), **CCIAA** (Italy), **Ecoserveis** (Spain), **CRES** (Greece) and **NUBIP** (Ukraine).

The **EU Energy Performance in Buildings Directive** 1791 of 2023 states that the goal is to completely decarbonize buildings and reduce emissions to zero by 2050. For the next 25 years, renovations will be in high demand, and qualified professionals will be needed to design and execute building improvements across Europe. The **NS4nZEBs** Life project serves as a useful reference point and an excellent tool to fulfill the demand for qualified professionals.



A **survey** conducted in participating countries established that there is a pressing need to stay up to date with the newest technologies and that there is a lack of qualified professionals in the field. **NS4nZEBs** created a platform for installers, engineers, and architects with modules covering different areas of skills needed for acquiring or upgrading their skill sets.



NS4nZEBs offers training to professionals on topics such as:

- » Legislation
- » nZEBs
- » Energy Management Systems
- » Photovoltaics
- » Heat Pumps and Ventilation
- » Storage
- » Solar Thermal
- » Energy Communities
- » Soft & Digital Skills
- » Entrepreneurship Competence
- » Organization

METHODS



The **ubiquitous blended learning** has been esteemed as the most appropriate method for this project. It combines traditional in-person education with online and digital tools, allowing learners to access resources and participate in learning activities anytime, anywhere. It emphasizes flexibility, accessibility, and the integration of technology to enhance the educational experience.

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Partners: **THOMAS MORE**



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УКРАЇНИ

For further information please contact PARTNER at ns4nzebs@partner.net

MODULES

The modules are generic and adaptable to each member state's local context. In different countries, the reach of professional functions of each of the profiles may be different, so the modules can be easily combined to adjust to different requirements and realities, and to the particular needs of each professional.

	ARCHITECTS 65h	ELECTRICAL AND MECHANICAL ENGINEERS 89h	HVAC ENGINEERS 89h	ELECTRICAL INSTALLERS 71h	PHOTOVOLTAIC/THERMAL INSTALLERS 40h	HVAC INSTALLERS 122h
Introduction and legislation	A1 5h Information about the project, EU policies and directives, national legislation	E1 5h Information about the project, EU policies and directives, national legislation	H1 5h Information about the project, EU policies and directives, national legislation	IE1 5h Information about the project, EU policies and directives, national legislation	IP1 5h Information about the project, EU policies and directives, national legislation	IH1 5h Information about the project, EU policies and directives, national legislation
nZEB and Zero Emission Building concept	A2 11h Energy efficiency, RES, biomass, sustainability, urban planning and EPB, certification systems.	E2 11h Energy efficiency, RES, biomass, sustainability, urban planning and EPB, certification systems.	H2 7h Energy efficiency, RES, biomass, sustainability, urban planning and EPB, certification systems.	IE2 5h Energy efficiency & management; RES in buildings	IP2 3h Energy efficiency & management; RES in buildings	IH2 5h Energy efficiency & HVAC management; RES in buildings, solar-related themes.
Photovoltaic	A3 9h Types of PV modules, design parameters and performance factors, elements in a PV installation	E3 18h Types of PV modules, design parameters and performance factors, elements in a PV installation			IP3 31h Basics of solar engineering, energystorage technologies, grid-connections, performance; installing, inspecting and maintenance.	
Solar Thermal	A4 5h Types of ST systems, their components, general configuration, application in buildings		H3 40h Solar thermal systems, geothermal. Applied methods for calculation and selection of suitable RES-based HVAC system		IP4 40h Solar thermal systems for buildings and single-family houses.	IH3 45h Solar thermal systems, geothermal. Applied methods for calculation and selection of suitable RES-based HVAC system
Heat pumps	A5 4h Types of heat pumps and applications, requirements for installation					IH4 27h Structure and different types of heat pumps. Installation of geothermal systems.
Ventilation	A6 3h Natural and mechanical ventilation; new smart ventilation systems					IH5 40h Installation and dismantling of HVAC equipment for RES. Methods for calculation and selection of suitable systems.
Storage systems	A7 2h Batteries, Small-scale applications for production of hydrogen from PV systems	F4 18h Small-scale applications for production of hydrogen from PV systems, management				
Energy management		E5 18h Energy management parameters, indicators, protocols, Hardware and software for EMS.				
Energy communities	A8 8h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation.	F6 18h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation.	H4 18h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation. Virtual lab.	IE3 18h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation. Virtual lab.	IP5 18h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation. Virtual lab.	IH6 18h Definition and benefits of the EC, examples, creation, engagement of stakeholders, exploitation. Virtual lab.
Organisational and financial issues	A9 7h Green procurement and LCC assessment, deep building refurbishment	F7 18h Step by step process of building refurbishment, organisational and financial issues, advice for energy efficiency and RES systems, analysis of user behaviour; Communicative skills, critical thinking, entrepreneurship, diversity and social responsibility; Digital skills.	H5 18h Step by step process of building refurbishment, organisational and financial issues, advice for energy efficiency and RES systems, analysis of user behaviour; Communicative skills, critical thinking, entrepreneurship, diversity and social responsibility; Digital skills.	IE4 18h Step by step process of building refurbishment, organisational and financial issues, advice for energy efficiency and RES systems, analysis of user behaviour; Communicative skills, critical thinking, entrepreneurship, diversity and social responsibility; Digital skills.	IP6 18h Step by step process of building refurbishment, organisational and financial issues, advice for energy efficiency and RES systems, analysis of user behaviour; Communicative skills, critical thinking, entrepreneurship, diversity and social responsibility; Digital skills.	IH7 18h Step by step process of building refurbishment, organisational and financial issues, advice for energy efficiency and RES systems, analysis of user behaviour; Communicative skills, critical thinking, entrepreneurship, diversity and social responsibility; Digital skills.
Working with the clients	A10 3h Advice for energy efficiency and RES systems. Analysis of user behaviour.					
Soft skills	A11 4h Communicative skills, emotional intelligence, critical thinking and decision-making. Entrepreneurship					
Digital skills	A12 4h Information and communication, digital skills.					

NZEB = Nearly Zero Energy Building, HVAC = Heating Ventilation Air Conditioning; PV = Photovoltaic; ST = Solar Thermal; RES = Renewable Energy Sources; LCC = Life Cycle Costing; EC = Energy Communities

Some of the graphic resources used in this brochure are from Flaticon.com