

***BUILD UP Skills – REbooting the GRreek
national platform and UPdating the national
roadmap***

BUS-REGRoUP

Deliverable title:

**Occupational and Functional Map for the workforce of
the construction sector for the efficient buildings
technologies
(WP 4 – D4.2)**

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BUILD UP Skills – Greece

**BUILD UP Skills – REbooting the GReek national platform and UPdating the national roadmap
– BUS-REGRoUP**

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D4.2 Occupational and Functional Map for the workforce of the construction sector for the efficient buildings technologies

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Further information

More details on BUILD UP Skills can be found at www.build-up.ec.europa.eu

More details on the LIFE CET programme can be found at https://cinea.ec.europa.eu/programmes/life_en

Occupational & Functional Map for the workforce of the construction sector dealing with issues of construction, installation of systems, and maintenance in "green buildings."

An Occupational & Functional Map is a report that outlines job profile's main features and characteristics. It gives an insight into the profession's function in terms of its content, responsibilities, and limitations, providing insights into sector trends, job titles and job roles. Doing so, the general framework and background for the development of **National Occupational Profiles** for each job profession are provided.

The Occupational Profiles (OPs) are benchmarks of performance. They provide the means to evaluate performance in an occupation: these are job-related statements about the ability, knowledge, understanding, and experience that a person must possess to perform essential tasks effectively. Anyone in a profession covered by these profile profiles can use them to determine the level of competence required and, more importantly, whether their performance meets industry expectations.

At the next stage in the development of the OPs, a Functional Map is drawn up, which provides an overview of the main work activities carried out within an occupation or profession and describes, in general, the results of the job. The development of a functional map begins with the definition of the occupation. The key functions that can be carried out by the occupation are then defined, and the process continues until the functions or activities identified can be carried out by an individual rather than a team or organization.

The BUS-REGROUP project identified with sufficient precision the skills required to work in the field of "Green Buildings" in Greece – either in the case of energy-efficient building renovations or for the construction of new "nearly zero-energy" buildings - through a combination of office research and consultation with representatives of the respective professions in Greece. The Charter produced defines the competences/skills that blue and white collar employees should possess, especially concerning RES and EE/Energy Efficiency.

The following sources have been used to develop the Charter:

1. The report on occupations and qualifications in energy efficiency, digitalization, and circular economy, as developed by the Construction Blueprint project, to implement a new strategic approach to the sectoral Skills Alliance.
2. The results of the PROF/TRAC (PROFessional multi-disciplinary TRAIning and Continuing development in skills for NZEB principles) project focusing on training and staff skills required to promote nearly zero performance buildings (NZEBs).
3. Directive 2009/28/EC on the promotion of the use of energy from renewable sources, and in particular Annex IV (Certification of installers) of the Directive as regards the skills of small-scale RES system installers in buildings.
4. Directive (EU) 2018/2001 of the European Parliament and the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast).
5. Directive 2021/0203 of the European Parliament and of the Council on energy efficiency

and the amending Regulation (EU) 2023/955 (recast).

6. Workshops held with the Labour Institute of GSEE, regarding the professional profiles of blue-collar professionals in the building construction industry.
7. The website of the Technical Chamber of Greece (<https://web.tee.gr/d-e-d/tmima-epaggelmatikon-thematon/epaggelmatika-dikaiomata/>) which describes the relevant legislation that defines the professional rights of Graduate Engineers regarding their employment in the construction industry of buildings.
8. The project BUILD UP Skills – Greece results, which focuses on professions and jobs for the construction workforce on the specific issues of RES and Energy Efficiency (EE) in buildings.

Table 1: Basic/new blue-collar professional skills required in relation to Energy Efficiency works and RES systems

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
3	Oil-painting technician	<ul style="list-style-type: none"> ❖ Prepares and manages the painting work ❖ Performs the required works for painting surfaces 	<ul style="list-style-type: none"> • Removal of loose paint/substrate • Material compatibility check and selection of suitable materials • Checking the surfaces to be painted • Understanding of construction drawings • Taking measurements • Preparation (cleaning) of surfaces to be painted • Preparation of materials to be applied • Collection and removal of materials and equipment from the project • Use of tools and site machinery 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM)
3	Masonry technician	<ul style="list-style-type: none"> ❖ Prepares and organizes the masonry construction work ❖ Builds masonry with artificial stones 	<ul style="list-style-type: none"> • Leveling • Removal of concrete frames • Grouting • Wetting and laying bricks in layers • Installation of masonry insulation material • Checking of wall flatness and verticality, brick/plinth straightness and layer horizontality • Material compatibility check • Embedding masonry forms • Interpretation of two-dimensional construction drawings • Demolition of masonry • Moulding • Preparation of mortar and concrete • Installation of masonry sutures • Concrete casting 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings ✓ Skills to implement buildings deep renovation, including through modular and industrial solutions. ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage)

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
5	Supervisor of construction project	<ul style="list-style-type: none"> ❖ Organizes the development of the construction site and coordinates its operations ❖ Takes care of the technical, qualitative, timely and budgeted construction of the project ❖ Monitors project administrative obligations, construction costs and timelines 	<ul style="list-style-type: none"> • Development of cooperation with the supervising engineer • Ensuring compliance with construction site safety standards, as well as health, safety and hygiene standards for construction workers • Management of the environmental impact of construction works • Estimation material supply needs and work duration • Control of budget execution • Checking the suitability of ready-mixed concrete • Identification of the tasks with special requirements in personnel and tools • Supervision of the compliance of the construction project with technical data and specifications • Application of the topographic plans • Taking specimens samples for quality control of materials • Organising the operations and construction site • Using software to create technical drawings 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings ✓ Skills to implement buildings deep renovation, including through modular and industrial solutions. ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage)
3	Coating technician	<ul style="list-style-type: none"> ❖ Prepares and organizes the work of applying coatings ❖ Applies traditional mortars (three layers) ❖ Apply internal plaster coatings (one layer) ❖ Applies thermal facade systems 	<ul style="list-style-type: none"> • Interpretation of construction drawings and making premeasurements • Building materials compatibility check • Use of tools and construction machinery • Sequence control of building works • Laying of sutures on horizontal and vertical surfaces • Preparation (cleaning) of surfaces to be plastered and wetting 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings ✓ Skills to implement buildings deep renovation, including through modular and industrial solutions. ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs).

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
			<ul style="list-style-type: none"> • Preparation, testing and pouring of mortar • Protection of the coated surface • Installation of guides and corner posts • Engraving the coated surface • Checking the waiting time for drying of the coating layer • Sanding of coating and priming of surfaces to be coated • Installation of metal mesh or fiberglass mesh • Restoration of surfaces with repair plaster • Installation of a waterproofing layer with glue on the surfaces to be covered and aluminum guides • Installation of thermal insulation boards and their support with plugs, installation of metal mesh or fiberglass mesh • Preparation and application of thermal coating • Collection and removal of materials and equipment from the construction project. 	<ul style="list-style-type: none"> ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage)
4	Designer	❖ Designs and processes technical drawings and three-dimensional illustrations, contributes to the drafting of technical documents related to the project and supports its implementation and monitoring.	<ul style="list-style-type: none"> • Read and interpret technical drawings, specifications and other technical information of the project. • Drawing up technical drawings (architectural, electrical, topographical, etc.) using software or conventional means 	<ul style="list-style-type: none"> ✓ Skills to implement buildings deep renovation, including through modular and industrial solutions. ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM)

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
			<ul style="list-style-type: none"> • Drawing up three-dimensional (3d) models and perspective visualizations using software. • Implementation of a procedure for checking and correcting drawings. • Implementation of key provisions, regulations and legislation per object of study and design. • Preparation of project related diagrams, data tables and technical reports. • Use of measuring tools: rangefinder, speedometer, spacer, stereoscope, spears, tripods, gps. • Measurement of quantities of materials and works. • Creating print layouts in design software. 	
3	<p style="text-align: center;">Stone artisan/craftsman</p>	<ul style="list-style-type: none"> ❖ Prepares and organizes the stone construction work ❖ Constructs or repairs the stone construction work 	<ul style="list-style-type: none"> • Interpretation of construction drawings • Use of tools and equipment • Demolition of components • Engraving, excavation and drilling of foundations • Breaking, ripping, cutting, chopping, chipping, carving stone • Preparation of mortar and concrete • Moulding and demolding, reinforcement placement and concrete casting • Leveling • Stone building (construction) • Spreading mortar • Covering joints (grouting) 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings ✓ Skills to implement buildings deep renovation, including through modular and industrial solutions. ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage)

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
			<ul style="list-style-type: none"> • Checking the flatness of masonry • Laying slate slabs on roofs • Waterproofing (waterproofing) and thermal insulation of structural elements • Installation of wooden bindings and wooden beams • Application of cement injections (grouts) • Application of metal reinforcement elements • Solving technical problems 	
4	<p align="center">Burner/boiler installer – maintainer</p>	<ul style="list-style-type: none"> ❖ Studies the manufacturers' instructions and the technical study, cooperates with the supervisor engineer, examines the site and checks the installation in the boiler room, estimates the benefit that will result if the customer chooses an energy-efficient system, costs and selects the equipment of the boiler installation ❖ Installs, connects new and maintains and repairs older oil-burning burners and appliances 	<ul style="list-style-type: none"> • Technical drawing • Body contractions. • Thermodynamics and Combustion Technology. • Oil and gas fuel burner installation regulations, legislation and applicable standards • Knowledge and use of simple and refractory insulation and sealants. • Specifications of materials and machinery. • Knowledge of plumbing and electrical installations. • Design of electrical installations. • Energy saving and automation techniques • Use of measuring - control instruments. 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings. ✓ Skills related to the utilization of RES (Renewable Energy Sources) in building heating systems ✓ Skills to integrate efficient heating technologies. ✓ Skills to install and deliver heating upgrades as part of renovation projects. ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency. ✓ Digital skills supporting overall energy efficiency in buildings, in particular through the increased use of Building Information Modelling (BIM)

EQF	PROFESSION	MAIN ROLE / FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYERS
				<ul style="list-style-type: none"> ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage) ✓ Skills to upgrade the smart operation of buildings for overall energy efficiency (use of sensors, automatic control and building management systems)
3	Aluminium and metal constructor	<ul style="list-style-type: none"> ❖ Prepares architectural aluminum constructions ❖ Implements architectural aluminum constructions ❖ Installs and delivers architectural aluminum structures 	<ul style="list-style-type: none"> • Uninstalling products without damaging adjacent structural components. • Management of incoming and recyclable materials • Installation of products to avoid thermal bridges. • Repair of possible damage caused. • Selection of the proper combination of materials (profiles, glazing, etc.) • Application of measurement techniques • Application of the technical manuals requirements of the system designer when assembling the panels in order to achieve maximum energy results • Cutting and assembly of profiles, installation of mechanisms, fittings, plastics, glazing, etc. • Identification of critical control points related to the quality of the structure and affecting its energy performance. • Design of technical drawings and identification of technical details • Software operation for calculating energy characteristics 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings. ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency. ✓ Digital skills supporting overall energy efficiency in buildings, through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage) ✓ Familiarity with green building certifications
3	Insulation technician – insulator	<ul style="list-style-type: none"> ❖ Prepares, organizes and coordinates the insulation work 	<ul style="list-style-type: none"> • Read and implement key plan elements • Measuring and recording the dimensions of structural elements 	<ul style="list-style-type: none"> ✓ Skills for implementing energy efficiency measures in buildings. ✓ Skills to implement buildings deep renovation, including through modular

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		<ul style="list-style-type: none"> ❖ Prepares and implements insulation systems 	<ul style="list-style-type: none"> • Use of measuring equipment (thermal camera, hygrometer, optical crack meter, chemical solutions for locating carbonation of concrete, etc.) • Knowledge and implementation of regulations, standards and legislation concerning material management and the implementation of thermal insulation systems. • Preparation of substrates and application of thermal insulation systems to structural elements • Preparation of substrates and implementation of moisture management systems in structural elements • Quality control of insulation work • Application of waterproofing systems for mechanical installations. • Preparation of substrates and application of passive fire protection systems for structural elements and electromechanical installations. • Preparation of substrates and implementation of seismic insulation systems and improvement of the building's response to earthquake • Implementation of systems for the protection and repair of concrete from damage and repair of the steel reinforcement of concrete from corrosion. • Implementation of stone suture systems and restoration of masonry connection with concrete. 	<p>and industrial solutions.</p> <ul style="list-style-type: none"> ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction, and resource efficiency. ✓ Digital skills supporting overall energy efficiency in buildings, through the increased use of Building Information Modelling (BIM) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage)

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			<ul style="list-style-type: none"> • Application of systems to increase the strength of infill masonry against seismic actions 	
5	<p>Technician of Cooling Installations - Ventilation & Air Conditioning</p>	<ul style="list-style-type: none"> ❖ Organizes cooling and air conditioning installations ❖ Installs cooling and air conditioning units ❖ Maintains cooling and air conditioning installations ❖ Repairs refrigeration and air conditioning installations 	<ul style="list-style-type: none"> • Interpretation of the architectural plan and drawing the area of the cooling and air conditioning installation • Cooling management and environmental protection • Carrying out and interpreting pressure and temperature measurements (and comparison with a thermodynamic pressure and temperature diagram based on the coolant fluid used in the unit) • Dismantling, installation, connection and maintenance of installation machinery, components, automation, and safety equipment • Provide recommendations for optimum efficiency or upgrading of a cooling or air conditioning system. • Calculation of heating/cooling loads and selection of equipment • Allocation of cooling and air conditioning system faults, leakage control and repairs • Configuration of the electrical installation of the cooling and air conditioning system • Study - construction of ventilation systems with heat exchangers and fans, and installation of air duct networks for cooling and air conditioning systems • Installation - utilization of solar thermal systems to assist the heating system (in case the installation concerns a water-based as a heat transfer medium, heat pump) 	<ul style="list-style-type: none"> ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills to integrate efficient cooling and heating technologies ✓ Skills to install and deliver cooling and heating upgrades as part of renovation projects. ✓ Skills related to carbon footprint over the lifetime of a material/system, circular construction and resource efficiency ✓ Digital skills supporting overall energy efficiency in buildings, through the increased use of Building Information Modelling (BIM) ✓ Skills to upgrade the smart operation of buildings for overall energy efficiency (use of sensors, automatic control and building management systems) ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage) ✓ Skills for implementing solar thermal (RES) utilization measures in buildings

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5	Technician of indoor Electrical Installations	<ul style="list-style-type: none"> ❖ Organizes and prepares the electrical installation work. ❖ Installs, checks, and delivers the electrical installations. ❖ Repairs, upgrades, and maintains the electrical installation and the electrical equipment 	<ul style="list-style-type: none"> • Design of schematics for electrical installations. • Study of schematics and specifications of the electrical installation. • Identification of difficulties and any necessary changes to the plans of the electrical installation. • Inspection of the electrical installation studies according to current regulations. • Preparation of installation sites for piping, cables, components, and devices and assembly of parts and sections of the installation. • Execution of expansion and upgrade work of the electrical installation. • Visual inspection of the electrical installation. • Performing measurements and tests of the electrical installation according to current standards. • Compilation of a responsible statement of the electrical installation in accordance with current standards. • Repair of malfunctions and inspection of the smooth operation of the installation. • Implementation of new settings, restoration, and inspection of the smooth operation of the installation. • Informing the customer about the possibilities of modernization and upgrading of the existing installation 	<ul style="list-style-type: none"> ✓ Skills for implementing measures to improve energy efficiency in buildings - bridging the gap towards Zero Emission Buildings (ZEBs). ✓ Skills for the application of Renewable Energy Sources (RES) measures in buildings. ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction, and efficient use of resources. ✓ Digital skills that support overall energy efficiency in buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems). ✓ Skills for the energy upgrade of historical and preserved buildings (cultural heritage)
4	Drywall/Plasterwork Technician	<ul style="list-style-type: none"> ❖ Organizes and coordinates the implementation of dry 	<ul style="list-style-type: none"> • Measurement and depiction of the dimensions of structural elements - reading and implementing basic design elements. 	<ul style="list-style-type: none"> ✓ Skills for the application of measures to improve energy efficiency in buildings. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular

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		<p>construction systems - plasterwork.</p> <ul style="list-style-type: none"> ❖ Prepares and implements dry construction systems - plasterwork 	<ul style="list-style-type: none"> • Knowledge and application of regulations, standards, and legislation related to material management and the implementation of dry construction systems - plasterwork. • Selection of appropriate methodology and materials for dry construction - plasterwork. • Leveling and installation of a dry construction framework. • Cutting, screwing, and joining plasterboards, cement boards, and mineral fiber panels. • Implementation of dry construction systems 	<p>construction, and efficient use of resources.</p> <ul style="list-style-type: none"> ✓ Digital skills that support overall energy efficiency in buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for the energy upgrade of historic and preserved buildings (cultural heritage).
3	Glass Panel Technician	<ul style="list-style-type: none"> ❖ Organizes the procurement, construction, and placement of glass panels. ❖ Processes glass panels and constructs glazings." ❖ Delivers, installs, and maintains the glass panels 	<ul style="list-style-type: none"> • Identification of glass panel defects • Reading technical drawings and creating a blueprint • Dismantling and recycling of glass panels, waste management and disposal • Calculation and declaration of technical performances of glass panels, declaration of environmental performances • Cutting and cleaning of glass panels, sanding of glass panel coating, assembling of spacers and beads, filling the glazing with gas, sealing the glazing • Transportation and installation of glass panels, supervision of installation • Maintenance of installed glass panels 	<ul style="list-style-type: none"> ✓ Skills for the application of measures to improve energy efficiency in buildings ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction, and efficient use of resources ✓ Skills for the energy upgrading of historic and preserved buildings (cultural heritage) ✓ Knowledge of energy-efficient glass technologies and familiarity with Smart Glass systems
5	Technician of Hydraulic Installations/Plumber	<ul style="list-style-type: none"> ❖ Organizes and prepares the work of the hydraulic installation. ❖ Installs, checks, maintains, and repairs 	<ul style="list-style-type: none"> • Interpretation and understanding of drawings and designs • Understanding and compliance with the regulatory framework - understanding of specific energy efficiency signs 	<ul style="list-style-type: none"> ✓ Skills for the implementation of energy efficiency improvement measures in buildings

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		<p>installations (thermal) hydraulic, air conditioning/ventilation.</p> <ul style="list-style-type: none"> ❖ Installs, checks, maintains, and repairs fuel gas storage/distribution systems and special fluids. ❖ Installation and maintenance of solar thermal systems in buildings 	<ul style="list-style-type: none"> • Installation of water distribution networks, air conditioning, and ventilation systems, • Installation and operation of heating systems and hot water supply • Recognition/assessment of components, types of pipes, pipe connections, types of drains, etc. • Recycling, reuse of materials and equipment based on the life cycle. • Skills in handling machines, instruments, and equipment for testing operations • Application of techniques and use of materials and tools for sealing and waterproofing • Welding metals using relevant tools • Techniques for detecting leaks in closed conduits with pressurized fluids using invasive and non-invasive methods • Support of renewable energy applications for heating/cooling. • Use of electrical tools and instruments, operation of an electrical control panel • Use of control systems and automations, troubleshooting and problem diagnosis 	<ul style="list-style-type: none"> ✓ Skills for the implementation of renewable energy source (RES) utilization measures in buildings. ✓ Skills for integrating efficient heating and cooling technologies ✓ Skills for the installation and provision of heating and cooling upgrades within the context of renovation projects. ✓ Skills related to the carbon footprint over the life of a material/system, circular construction, and efficient use of resources ✓ Digital skills that support overall energy efficiency in buildings, especially through the increased use of Building Information Modeling (BIM) ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems) ✓ Skills for the energy upgrading of historic and preserved buildings (cultural heritage)
<p>??</p>	<p>Technician of restoration & maintenance of historic and traditional buildings</p>	<ul style="list-style-type: none"> ❖ Implements restoration and maintenance work on Walls - Masonry. ❖ Implements restoration and maintenance work on joints - coatings and finishes. ❖ Implements restoration and maintenance work on Wooden Roof 	<ul style="list-style-type: none"> • Measurements - re-measurements (lengths - widths, areas, volumes) • Stone processing (chiseling, stone cutting) • Brick processing (baked bricks, raw bricks) • Formation of rubble (stones, bricks, etc.) • Formation of wooden grids (from smoothed sticks, from branches) 	<ul style="list-style-type: none"> ✓ Skills for the application of energy efficiency improvement measures in buildings. ✓ Skills related to the carbon footprint over the life of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support overall energy efficiency of buildings, especially through increased use of Building Information Modeling (BIM).

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		Constructions, Floors, Walls, Frames, and related metal parts	<ul style="list-style-type: none"> • Formation of wall openings (doors, windows) • Wood cross-section processing • Mortar application • Joint cleaning • Safe removal and transport of structural elements • Maintenance of machines & tools 	<ul style="list-style-type: none"> ✓ Skills for upgrading the smart functionality of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems). ✓ Skills for the energy upgrading of historical and preserved buildings (cultural heritage).
3	Mold and concrete injection technician	<ul style="list-style-type: none"> ❖ Assembles and constructs molds. ❖ Oversees the concrete injection process. ❖ Dismantles the molds and delivers the project 	<ul style="list-style-type: none"> • Interpretation of technical drawings. • Measurement and inspection of construction materials. • Handling of tools and machinery. • Construction, support, and connection of the molds on the shaped floor to the ground and on the supports - Construction of support braces. • Sealing and filling of molds. • Shaping and impregnating concrete surfaces. • Covering concrete surfaces with insulating materials. • Maintenance and protection of concrete. • Monitoring the hardening process and inspection of the concrete. • Finishing of concrete surfaces. 	<ul style="list-style-type: none"> ✓ Skills for implementing measures to improve the energy efficiency of buildings. ✓ Skills for implementing radical renovation of buildings, among others through articulated and industrial solutions. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and efficient use of resources. ✓ Digital skills that support higher energy efficiency in buildings, especially through increased use of Building Information Modeling (BIM).
4	Smart Buildings Programming Technician	<ul style="list-style-type: none"> ❖ Designs, implements, and manages smart systems in buildings. 	<ul style="list-style-type: none"> • Design and calculation of the smart network system, based on the thermal load, duration curves, energy simulations, etc. • Development of energy-saving concepts and design of electrical systems. • Evaluation of integrated systems. • Creation of AutoCAD designs. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of energy efficiency improvement measures in buildings. ✓ Digital skills that support overall energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency

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			<ul style="list-style-type: none"> • Addressing IT problems and developing prototype software. 	<p>(use of sensors, automatic control, and building management systems).</p> <ul style="list-style-type: none"> ✓ Skills for the energy renovation of historic and preserved buildings (cultural heritage).
5	<p>Operator of mobile machineries- machineries of public and industrial works</p>	<ul style="list-style-type: none"> ❖ Operates the machineries ❖ Tests, checks, and uses the safety systems. ❖ Recognizes the conditions of the project and adjusts the operation accordingly. 	<ul style="list-style-type: none"> • Basic knowledge of Mechanical Design and fundamental knowledge of mechanics. • Basic knowledge of electrical engineering, specifically: basic electrical systems of work machinery, basic electrical automations, and electronic instruments of work machinery. • Basic knowledge in the use of networks, specifically: compressed air networks, electrical networks, and fuel networks. • Knowledge of C.R.T. (This might refer to a specific code or set of regulations. In a Greek context, it could possibly be the Code of Road Traffic. But without context, this is an assumption). • Knowledge of basic characteristics, specifications, and operation of work machines by category. 	<ul style="list-style-type: none"> ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and efficient resource use. ✓ Knowledge of recycling principles and waste management, especially for machine parts, such as batteries, filters, liquids, and other consumables. ✓ Familiarity with sustainable maintenance practices. ✓ Awareness of environmental regulations and standards related to machine operations, emissions, and waste management. ✓ Knowledge of technologies and practices for energy efficiency in machine operation. ✓ Ability to collect and analyze data from machine sensors and diagnostic systems to identify patterns, trends, and potential issues. ✓ Know how to operate diagnostic software.
4	<p>Gas technician, Combustion gas technician</p>	<ul style="list-style-type: none"> ❖ Installs, expands, maintains, and repairs networks for the transportation and distribution of gaseous fuels as well as their related valves and instruments. 	<ul style="list-style-type: none"> • Basic knowledge of Mechanical Design and fundamental principles of mechanics. • Blocking and safety devices. • Understanding basic principles of Mechanics, Fluid Mechanics, Thermodynamics, and Electrical Installations. • Welding technology and pipe cutting. 	<ul style="list-style-type: none"> ✓ Improvement of energy efficiency in buildings. ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction, and efficient use of resources. ✓ Digital skills that support overall energy efficiency in buildings, especially through

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		<ul style="list-style-type: none"> ❖ Installs, maintains, repairs, and converts internal networks of gaseous fuels and flue gas conduits for domestic consumers, as well as the devices and isolation valves of these systems. ❖ Inspects gaseous fuel installations and co-signs a certification of the installation's inspection. ❖ Installs, maintains, and repairs burners for the combustion of gaseous fuels. 	<ul style="list-style-type: none"> • Principles and rules for gas leakage control. • Use of hand tools. • Elements of Automatic Control (EAC). • Reading technical specifications and standardization catalogs for measurement devices, pressure reduction/adjustment, shut-off valves, and control instruments. • Reading technical specifications and standardization catalogs for conduits and pipelines. 	<p>the increased use of Building Information Modeling (BIM).</p> <ul style="list-style-type: none"> ✓ Skills for upgrading the smart functionality of buildings for higher energy efficiency (use of sensors, automatic control, and energy management systems). ✓ Skills related to the utilization of RES (Renewable Energy Sources) in building heating systems
3	<p>Wood Technician/ Carpenter</p>	<ul style="list-style-type: none"> ❖ Processes raw timber and wood-based products. ❖ Constructs roofs and frames for buildings. 	<ul style="list-style-type: none"> • Reading technical drawings and interpreting them. • Use of measuring tools, knowledge of the physical and mechanical properties of wood. • Appropriate wood processing. • Construction of wooden roofs and installation of insulating materials. • Construction and installation of wooden frames. 	<ul style="list-style-type: none"> ✓ Skills for implementing measures to improve energy efficiency in buildings. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and the efficient use of resources. ✓ Digital skills that support the increased energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for the energy upgrade of historic and preserved buildings (cultural heritage). ✓ Familiarity with green building certifications.

Table 2: Basic/new White-collar professional skills required in relation to Energy Efficiency works and RES systems

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
6	Civil Engineer	<ul style="list-style-type: none"> ❖ Preparation and supervision of the application of Architectural and structural studies of building projects ❖ Bioclimatic building design ❖ Preparation of energy efficiency studies, upgrading and energy saving of the building shell ❖ Conducting energy audits 	<ul style="list-style-type: none"> • Use of design and computational software • Seismic engineering and anti-seismic technology • Building construction and physics of buildings • Structural materials and materials technology • Bioclimatic building design • Knowledge of the application of KENAK (possibly referring to the Greek Energy Performance Regulation) and the relevant Technical Guidelines for the energy performance of buildings – Ability to prepare an Energy Performance Study of buildings or/and a Study on energy upgrading of buildings • Knowledge of the application of the legislative and regulatory framework of the construction sector. • Conducting energy audits of buildings • Preparation of proposals for energy upgrading of buildings • Life-cycle analysis in building construction 	<ul style="list-style-type: none"> ✓ Skills for the application of measures to improve energy efficiency in buildings ✓ Skills for the application of Renewable Energy Sources (RES) utilization measures in buildings ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap to zero-emission buildings (ZEBs) ✓ Skills for the installation and provision of heating and cooling upgrades in the context of renovation projects ✓ Skills related to the carbon footprint during the lifespan of a material/system, circular construction, and efficient use of resources ✓ Digital skills that support overall energy efficiency of buildings, especially through increased use of Building Information Modeling (BIM) ✓ Skills for upgrading the smart functionality of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems) ✓ Skills for the energy upgrading of historical and preserved buildings (cultural heritage)
6	Architect	<ul style="list-style-type: none"> ❖ Compilation and supervision of the application of architectural and structural studies of building projects. 	<ul style="list-style-type: none"> • Use of design and computational software. • Seismic engineering and anti-seismic technology. • Building construction and building physics. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve the energy efficiency of buildings. ✓ Skills for implementing renewable energy sources (RES) measures in buildings.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
		<ul style="list-style-type: none"> ❖ Bioclimatic building design. ❖ Compilation of energy efficiency studies, upgrading, and energy saving of the building shell. ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Structural materials and material technology. • Bioclimatic building design. • Knowledge of the application of the legislative and regulatory framework of the building construction sector. • Knowledge of the application of KENAK (which stands for the Regulation on the Energy Performance of Buildings in Greece) and the related Technical Guidelines for the energy performance of buildings - Ability to draft a Building Energy Performance Study and/or Building Energy Upgrading Study. • Conducting energy audits of buildings. • Compilation of proposals for the energy upgrade of buildings. • Life-cycle analysis in building constructions 	<ul style="list-style-type: none"> ✓ Skills for new and existing buildings with nearly zero energy consumption (nZEBs) and bridging the gap to zero-emission buildings (ZEBs). ✓ Skills for the installation and provision of heating and cooling upgrades within renovation projects. ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support the increased energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic controls, and building management systems). ✓ Skills for the energy upgrade of historical and preserved buildings (cultural heritage)
6	Mechanical Engineer	<ul style="list-style-type: none"> ❖ Preparation and supervision of the application of studies on heating, cooling, air conditioning, and ventilation installations. ❖ Preparation and supervision of the application of studies on building service network installations. ❖ Conducting studies on the energy efficiency, 	<ul style="list-style-type: none"> • Use of Design and computational software. • Thermodynamics - fluid mechanics. • Design and operation of heating, cooling, and ventilation systems. • Study of indoor electrical installations in buildings. • Knowledge of the application of the "KENAK" and the related Technical Guidelines for the energy efficiency of buildings – Ability to conduct a Study on the energy efficiency of buildings 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve energy efficiency in buildings. ✓ Skills for the implementation of measures to utilize Renewable Energy Sources (RES) in buildings. ✓ Skills for new and existing Nearly Zero Energy Buildings (nZEBs) and bridging the gap to Zero Emission Buildings (ZEBs). ✓ Skills for integrating efficient heating and cooling technologies. ✓ Skills for the installation and provision of heating and cooling upgrades within renovation projects.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
		<p>upgrading, and energy savings of building envelopes.</p> <ul style="list-style-type: none"> ❖ Conducting studies on the energy efficiency, upgrading, and energy savings of installations. 	<p>and/or a Study on the energy upgrading of buildings.</p> <ul style="list-style-type: none"> • Knowledge of the legislative and regulatory framework of the building construction sector. • Study on the application of RES (Renewable Energy Sources) systems in buildings. • Energy design of buildings. • Design of smart buildings – automation systems and energy management. • Conducting energy audits of buildings. • Drafting proposals for energy upgrading of buildings. 	<ul style="list-style-type: none"> ✓ Skills related to the carbon footprint over the life cycle of a material/system, circular construction, and efficient use of resources. ✓ Digital skills that support the higher energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart functionality of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems). ✓ Skills for the energy upgrading of historic and preserved buildings (cultural heritage).
6	Electrical Engineer	<ul style="list-style-type: none"> ❖ Preparation and supervision of the application of studies on heating, cooling, air conditioning, and ventilation installations. ❖ Preparation and supervision of the application of studies on building service network installations. ❖ Conducting studies on the energy performance, upgrading, and energy saving of building envelopes. ❖ Conducting studies on the energy performance, 	<ul style="list-style-type: none"> • Use of Design and Computational Programs. • Design and operation of heating, cooling, and ventilation systems. • Study of building indoor electrical installations. • Knowledge of the application of KENAK (probably referring to the Energy Efficiency Regulation of Buildings in Greece) and the relevant Technical Guidelines for the energy performance of buildings - Ability to conduct a Building Energy Performance Study or/and Building Energy Upgrade Study. • Knowledge of the legislative and regulatory framework of the building construction sector. • Study of the application of Renewable Energy Systems in buildings. 	<ul style="list-style-type: none"> ✓ Skills for the application of measures to improve energy efficiency in buildings. ✓ Skills for the application of measures to utilize Renewable Energy Sources (ΑΠΕ: Ανανεώσιμες Πηγές Ενέργειας) in buildings. ✓ Skills for new and existing buildings of nearly zero energy consumption (nZEBs) and bridging the gap to zero emission buildings (ZEBs). ✓ Skills for the integration of efficient heating and cooling technologies. ✓ Skills for the installation and provision of heating and cooling upgrades in the context of renovation projects. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and efficient use of resources.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
		<p>upgrading, and energy saving of installations.</p> <ul style="list-style-type: none"> ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Energy design of buildings. • Design of smart buildings - automation and energy management systems. • Conducting energy audits of buildings. • Drafting proposals for building energy upgrades. 	<ul style="list-style-type: none"> ✓ Digital skills that support overall energy efficiency of buildings, especially through increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems). ✓ Skills for the energy upgrade of historic and preserved buildings (cultural heritage).
6	<p>Rural and Surveying Engineer</p>	<ul style="list-style-type: none"> ❖ Elaboration and supervision of the application of Architectural and structural studies of building projects up to two floors in height. ❖ Compilation of energy efficiency studies, upgrading, and energy saving of the building envelope of buildings up to two floors in height. ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Use of design and computational software. • Basic principles of Seismic engineering and anti-seismic technology. • Knowledge of the application of KENAK (Energy Efficiency Regulation of Buildings) and the related Technical Guidelines for the energy performance of buildings - Ability to prepare an Energy Efficiency Study of buildings and/or a Study for the energy upgrading of buildings. • Knowledge of the application of the legislative and regulatory framework of the building construction sector. • Conducting energy audits of buildings. • Compilation of proposals for energy upgrading of buildings. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve the energy efficiency of buildings. ✓ Skills for the application of measures utilizing Renewable Energy Sources (RES) in buildings. ✓ Skills for new and existing buildings with nearly zero energy consumption (nZEBs) and bridging the gap towards zero-emission buildings (ZEBs). ✓ Skills for the installation and provision of heating and cooling upgrades within the context of renovation projects. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and efficient resource use. ✓ Digital skills supporting overall energy efficiency in buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart functionality of buildings for overall energy efficiency (use of

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
				sensors, automatic controls, and building management systems).
6	Chemical Engineer	<ul style="list-style-type: none"> ❖ Conducting studies on energy performance, upgrading, and energy saving of building shells. ❖ Conducting studies on energy performance, upgrading, and energy saving of installations. ❖ Conducting energy audits 	<ul style="list-style-type: none"> • Use of Design and Computational Software • Design and operation of heating, cooling, and ventilation systems • Knowledge of the application of KENAK and the relevant Technical Guidelines for the energy performance of buildings - Ability to prepare an Energy Performance Study of buildings and/or an Energy Upgrade Study of buildings. • Knowledge of the application of the legislative and regulatory framework of the construction sector • Conducting energy audits of buildings • Drafting proposals for the energy upgrading of buildings. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve energy efficiency in buildings. ✓ Skills for the application of RES (Renewable Energy Sources) utilization measures in buildings. ✓ Skills for new and existing buildings with nearly zero energy consumption (nZEBs) and bridging the gap to zero-emission buildings (ZEBs). ✓ Skills for integrating efficient heating and cooling technologies. ✓ Skills for installing and providing heating and cooling upgrades within renovation projects. ✓ Skills related to the carbon footprint over the life of a material/system, circular construction, and the efficient use of resources. ✓ Digital skills that support the increased energy performance of buildings, especially using Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems).
6	Mining engineer and Metallurgical engineer	<ul style="list-style-type: none"> ❖ Conducting studies on energy efficiency, upgrading, and energy saving of installations. ❖ Conducting energy audits 	<ul style="list-style-type: none"> • Use of design and computational software. • Knowledge of the application of KENAK (Energy Efficiency Regulation of Buildings) and the relevant Technical Guidelines for the energy efficiency of 	<ul style="list-style-type: none"> ✓ Skills for the application of measures to improve energy efficiency in buildings. ✓ Skills for the implementation of RES (Renewable Energy Sources) measures in buildings.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
			<p>buildings - Ability to conduct an energy efficiency study of buildings and/or an energy upgrade study of buildings.</p> <ul style="list-style-type: none"> • Knowledge of the legislative and regulatory framework of the construction industry. Conducting energy audits of buildings. • Drafting proposals for the energy upgrading of buildings. 	<ul style="list-style-type: none"> ✓ Skills for new and existing nearly zero-energy buildings (nZEBs) and bridging the gap to zero-emission buildings (ZEBs). ✓ Skills related to the carbon footprint over the lifetime of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support the increased energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems).
6	Naval Engineer	<ul style="list-style-type: none"> ❖ Drafting and supervising the application of studies on heating, cooling, air conditioning, and ventilation installations. ❖ Drafting and supervising the application of studies on building service network installations. ❖ Drafting studies on energy efficiency, upgrading, and energy savings of the building envelope. ❖ Drafting studies on energy efficiency, upgrading, and energy savings of installations. ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Use of design and computational software. • Design and operation of heating, cooling, and ventilation systems. • Study of indoor electrical installations of buildings. • Knowledge of the application of KENAK (KEvAK) and the related Technical Guidelines for the energy performance of buildings - Ability to draft a Study of energy performance of buildings or/and a Study for the energy upgrading of buildings. • Knowledge of the legislative and regulatory framework of the building construction sector. Study of the application of RES (Renewable Energy Systems) in buildings. • Energy design of buildings. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve energy efficiency in buildings. ✓ Skills for the application of measures exploiting Renewable Energy Sources (RES) in buildings. ✓ Skills for new and existing nearly zero energy consumption buildings (nZEBs) and bridging the gap to zero emissions buildings (ZEBs). ✓ Skills for the integration of efficient heating and cooling technologies. ✓ Skills for the installation and provision of heating and cooling upgrades within renovation projects. ✓ Skills related to the carbon footprint over the life of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support overall energy efficiency in buildings, especially through

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
			<ul style="list-style-type: none"> • Design of smart buildings - automation and energy management systems. • Conducting energy audits of buildings. • Drafting proposals for the energy upgrading of buildings. 	<p>increased use of Building Information Modeling (BIM).</p> <ul style="list-style-type: none"> ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems).
6	Spatial Planning, Urban Planning and Development Engineer	<ul style="list-style-type: none"> ❖ Development of Architectural Studies of Building Projects for simple architectural tasks and new building projects up to two floors in height. ❖ Development of studies on energy performance, upgrade, and energy savings of the building envelope for building projects up to two floors in height, excluding special-purpose buildings and up to 200 sq.m. ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Use of design and computational software • Seismic engineering and earthquake-resistant technology • Construction and building materials and materials technology • Knowledge of the application of KENAK (Energy Efficiency Regulation) and the related Technical Guidelines for the energy performance of buildings – Ability to develop a Study on the energy performance of buildings and/or a Study on the energy upgrade of buildings • Knowledge of the legislative and regulatory framework of the building construction sector - Knowledge of the application of KENAK and the related Technical Guidelines for the energy performance of buildings • Conducting energy audits of buildings • Drafting proposals for the energy upgrade of buildings. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve energy efficiency in buildings ✓ Skills for the application of RES (Renewable Energy Sources) utilization measures in buildings. ✓ Skills for new and existing nearly Zero-Energy Buildings (nZEBs) and bridging the gap to Zero Emissions Buildings (ZEBs). ✓ Skills for the installation and provision of heating and cooling upgrades within the context of renovation projects. ✓ Skills related to the carbon footprint over the life cycle of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support the overall energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for the upgrade of the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems).
6	Environmental Engineer	<ul style="list-style-type: none"> ❖ Conducting energy audits 	<ul style="list-style-type: none"> • Use of Design and Computational Software • Knowledge of the application of KENAK (Greek Regulation for the Energy 	<ul style="list-style-type: none"> ✓ Skills for the implementation of measures to improve the energy efficiency of buildings.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
			<p>Efficiency of Buildings) and the related Technical Guidelines for the energy efficiency of buildings – Ability to conduct a Study on the Energy Performance of buildings and/or a Study on the Energy Upgrade of buildings.</p> <ul style="list-style-type: none"> • Knowledge of the legislative and regulatory framework of the building construction sector. • Conducting energy audits of buildings. • Drafting proposals for the energy upgrading of buildings. 	<ul style="list-style-type: none"> ✓ Skills for the implementation of RES (Renewable Energy Sources) utilization measures in buildings. ✓ Skills for the integration of efficient heating and cooling technologies. ✓ Skills for the installation and provision of heating and cooling upgrades within renovation projects. ✓ Skills related to the carbon footprint over the lifespan of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support overall energy efficiency in buildings, especially through increased use of Building Information Modeling (BIM). ✓ Skills for the upgrade of the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems)
6	Mineral Resources Engineer	<ul style="list-style-type: none"> ❖ Conducting studies on energy efficiency, upgrading, and energy savings of facilities. ❖ Conducting energy audits 	<ul style="list-style-type: none"> • Use of Design and Computational Software • Knowledge of the application of KENAK (an abbreviation for Regulation of Energy Performance of Buildings in Greek) and the relevant Technical Guidelines for the energy efficiency of buildings - Ability to draft a Study on the energy performance of buildings and/or a Study on the energy upgrade of buildings. • Knowledge of the legislative and regulatory framework of the building construction sector 	<ul style="list-style-type: none"> ✓ Skills for applying measures to improve energy efficiency in buildings. ✓ Skills for the application of Renewable Energy Sources (RES) utilization measures in buildings. ✓ Skills for integrating efficient heating and cooling technologies. ✓ Skills for the installation and provision of heating and cooling upgrades within the context of renovation projects. ✓ Skills related to the carbon footprint over the life span of a material/system, circular construction, and efficient use of resources.

EQF	PROFESSION	GENERAL ROLE/FUNCTION	GENERAL SKILLS	SKILLS EXPECTED BY EMPLOYEERS
			<ul style="list-style-type: none"> • Conducting energy audits of buildings • Drafting proposals for the energy upgrade of buildings. 	<ul style="list-style-type: none"> ✓ Digital skills that support overall energy efficiency of buildings, especially through the increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems)
6	<p align="center">Production and Management Engineer</p>	<ul style="list-style-type: none"> ❖ Preparation and supervision of studies for heating, cooling, air conditioning, and ventilation installations. ❖ Preparation and supervision of studies on service network installations for buildings. ❖ Preparation of studies on energy performance, upgrading, and energy saving of building envelope. ❖ Preparation of studies on energy performance, upgrading, and energy conservation of installations. ❖ Conducting energy audits. 	<ul style="list-style-type: none"> • Use of Design and Computational Software. • Design and operation of heating, cooling, and ventilation systems. • Study of internal electrical installations in buildings. • Knowledge of the application of KENAK and the relevant Technical Guidelines for the energy performance of buildings - Ability to conduct a Study on the Energy Performance of buildings and/or a Study on the Energy Upgrading of buildings. • Knowledge of the legislative and regulatory framework of the building construction sector. • Conducting energy audits of buildings. • Drafting proposals for the energy upgrading of buildings 	<ul style="list-style-type: none"> ✓ Skills for implementing measures to improve energy efficiency in buildings. ✓ Skills for implementing Renewable Energy Sources (RES) measures in buildings. ✓ Skills for new and existing Nearly Zero-Energy Buildings (nZEBs) and bridging the gap to Zero Emission Buildings (ZEBs). ✓ Skills for integrating efficient heating and cooling technologies. ✓ Skills for installing and providing heating and cooling upgrades in the context of renovation projects. ✓ Skills related to the carbon footprint over the life cycle of a material/system, circular construction, and efficient resource use. ✓ Digital skills that support overall energy efficiency in buildings, especially through increased use of Building Information Modeling (BIM). ✓ Skills for upgrading the smart operation of buildings for overall energy efficiency (use of sensors, automatic control, and building management systems)