

BUILD UP Skills BULGARIA Factsheet	
BUILD UP skills activities of the country	
BUS Pillar I project title (contract number)	BUILD UP Skills Bulgaria (BUILD UP SKILLS BG) IEE/11/BWI/415 - SI2.604347
BUS Pillar II project title (contract number)	Energy Training for Professionals in the Building Sector in Bulgaria (BUILD UP Skills EnerPro) IEE/13/BWI/686/SI2.680174
Horizon 2020 Construction skills project title (contract number)	Train-to-NZEB (649810)
BUILD UP Skills ENERPRO	
Project coordinator's full name	EnEffect Group
Contact person's name	Dragomir Tzanev
Contact person's phone	00359 29 632169; 00359 882 493 110
Contact person's email	dtzanev@eneffect.bg
Project Partners	<ul style="list-style-type: none"> . National Agency for Vocational Education and Training . Bulgarian Construction Chamber . PassiveHouse Institute . Professional vocational school for construction and architecture - Pazardzhik . Vocational School of Construction, Architecture and Geodesy "Penyo Penev" - Ruse . Bulgarian-German Vocational Training Centre State Enterprise - Pleven . Vocational School of Transport and Energy "Henry Ford" . Vocational High School of Electronics "John Atanasov"
Project website	http://busenerpro.com
Keywords	Energy, nearly zero-energy buildings (NZEB), workforce, workforce qualification
Duration	Start date: 01/09/2014 End date: 28/02/2017
Budget	EUR 446,731 (EU contribution 75%)
Context	
Summary description	The project actions will result in actual trainings and certification of workers on the new programmes. Additionally, the project will improve the institutional arrangements in the vocational training system, will reduce the gap in continuing professional training of trainers and will significantly contribute to addressing all priority areas set in the National

	Roadmap, developed under the Pillar I project of the BUILD UP Skills initiative.
Objectives	<ul style="list-style-type: none"> . Elaborate a core of required technological competences related to the EE and RE solutions in buildings within a newly established Centre of Excellence. . Review the State Educational Requirements and initiate the necessary changes. . Develop and license new training programs with the newly elaborated technical competences. . Establish capacity for professional training of trainers and train and certify a sufficient number of trainers.
Target skills/ professions	<ul style="list-style-type: none"> . Civil engineering . Electricity engineering and energy sector
Project's results and impact	
Results ¹	<ul style="list-style-type: none"> . Establishing of a national Center of Excellence for Energy Efficiency and Renewable Energy solutions (RES) in buildings, which will ensure the sustainability of proposed actions. . Elaboration of a set of technological competences (training contents) for the professions in professional directions "Civil engineering" and "Electrical engineering and energy sector" (related to RES in buildings). . Review and proposals for changes of the State Educational Requirements. . Development of at least 10 new training programs for acquiring of qualification on selected professions using the new training contents, including capacities for cross-craft training. . Development of an online training platform. . Establishing of capacity for professional training and certification of trainers through the Centre of Excellence and beyond. . Actual training of at least 250 workers and 50 trainers.
Lessons learnt ²	<ul style="list-style-type: none"> . A 5-day "train the future trainer of trainers" course in Dublin, conducted by MosArt/Passive House Academy turned out to be a huge success, mostly due to its practical content and opportunity to receive a "hands-on experience" of the learning methods. . The pedagogic skills of the professional trainers are sufficient but they hardly have access to innovative technologies, products and materials . Cooperation with the industry should be fostered - both in terms of access to know-how and for provision of facilities for practical trainings . The theoretical part of the trainings was preceded and supported by an online training platform developed by Passive House Institute,

¹ <https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-enerpro>

² <https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-enerpro>

	<p>which is also applicable for further trainings. It is useful for saving time from theoretical training without risking quality and is fast becoming a part of the normal training routine</p> <ul style="list-style-type: none"> . The importance of the practical trainings should not be underestimated in any case, despite the long tradition of classroom training . Specific demonstrations, especially pressurization tests and thermal imaging, are very attractive and useful in the courses . Best practices, examples and lessons learned in the national context are more valuable and effective than directly imported foreign examples.
Success factors ³	<ul style="list-style-type: none"> . Involvement of actual and active VET providers . Involvement of practitioners as lecturers in the TTT courses . Training for trainers designed and performed by PHA - Ireland and PHI - Germany . Training of trainers onsite, in the premises of the VET provider . Active internal and external communication . Involvement of external partners and cooperation with other ongoing projects . Involvement of the National Agency for Vocational Education and Training as implementing body . Involvement of the Bulgarian Construction Chamber as partner responsible for monitoring, promotion and dissemination
Barriers	<ul style="list-style-type: none"> . Lack of facilities for practical training . Lack of experience and materials for practical training . Lack of demand for NZEB-related training due to the limited market share of NZEB (there is still only 1 documented building in Bulgaria corresponding to the national NZEB standard) . No specialized construction companies to attract as frontrunners . Slow market acceptance of international energy efficiency and sustainable building standards (Passive House, BREEAM, LEED, DGNB, etc.) . Insufficient political and administrative will for imposing the NZEB standard
Key needs	<ul style="list-style-type: none"> . Promotion of the ongoing training offer from active VET providers . Communication campaign on NZEB-related issues . Support (dissemination of information, promotion and organization of training courses) from professional chambers and associations . Support from national authorities responsible for employment, vocational training and life-long learning (National Employment Agency, Ministry of Labour and Social Policy, National Agency for Vocational Education and Training)

³ Input from Dragomir Tzanev, April 2017

	<ul style="list-style-type: none"> Requirements for specific qualification and/or competences should be integrated in procurement procedures for energy efficiency projects, especially in the public sector
Recommendations ⁴	<ul style="list-style-type: none"> Develop a scheme consisting of multiple short-term training courses with a view to step-by-step acquiring professional qualification within a credit system Involve professional chambers, associations and industrial partners from the beginning of the activities Involve responsible public authorities from the beginning of the activities Make sure you have sufficient resources and facilities for practical training activities Cooperate with other related projects and initiatives within a large-scale communication campaign (promote training courses as part of a broader NZEB market acceptance campaign)
Replicability ⁵	<ul style="list-style-type: none"> 12 new training programmes (10 for construction workers and 2 for trainers) can be used in similar projects Online train-the-trainer platform can be used under the conditions of the implementing partner (Passive House Institute) Similar programmes can be developed for other countries in transition, having in regard the similarities in the building stock and traditions and the market barriers The established Center of Excellence is an positive initiative of combining the efforts of various stakeholders for increasing the quality of VET in the construction sector which can also be replicated at regional level

Project indicators				
Common Performance Indicators	Ex ante target	Interim results	Final result*	Target 2020
Number of training courses triggered by the action	24	12	25 + 4 pilots	250 by project partners 2480 by other VTCs
Number of people that will be trained	300	120	433 (without pilots)	3,325 by project partners 31,250 by other VTCs
Number of hours taught in the frame of the courses triggered	1,200	124	1,340 (without pilots)	15,000 by project partners 148,800 by other VTCs
Estimated specific cost to qualify each trainee	1,117 euro/trainee	NA	€1,035**	€ 99 by project partners

⁴ Input from Dragomir Tzanev, April 2017

⁵ Input from Dragomir Tzanev, April 2017

				€ 11 for all triggered trainings
Renewable Energy production triggered	3,710 toe/year on average	NA	Planned/2016: 671 toe/year Achieved/2016: 507 toe/year	Planned/2020: 19,094 toe Projections/2020: 20,241 toe
Primary energy savings compared to projections	13,027 toe/year on average	NA	Planned/2016: 2,270 toe/year Achieved/2016: 1,722 toe/year	Planned/2020: 68,482 toe Projections/2020: 72,591 toe
Reduction of greenhouse gas emissions	61,300 tCO ₂ /year on average	NA	Planned/2016: 29,940 tCO ₂ /year on average Achieved/2016: 29,940 tCO ₂ /year on average	Planned/2020: 1,121,103 tCO ₂ Projections/2020: 1,188,369 tCO ₂

Notes: * For final reporting, a more conservative approach for estimation of savings was selected. ** - Total eligible costs of the project divided by number of trainee. Does not represent the cost per trainee as the costs cover a number of preparatory and accompanying activities.

Train-to-NZEB	
Country organisations involved	<ul style="list-style-type: none"> . Energy Efficiency Center - EnEffect (coordinator) . Bulgarian Construction Chamber . BSYS
Contact person's name	Dragomir Tzanev
Contact person's phone	00359 29 632169; 00359 882 493 110
Contact person's email	dtzanev@eneffect.bg
Project website	http://www.train-to-nzeb.com/
Keywords	Quality, Training, Construction, Workers, Energy
Duration	Start date: 2015/06/01 End date: 2018/06/01
Budget	EUR 1,426,333.75 (EU contribution 100%)
Summary description	<p>The main tasks of the project include:</p> <ul style="list-style-type: none"> . The design and equipment of 4 fully active training centers (in Bulgaria, Romania, Turkey and the Czech Republic) and 1 pilot center (in Ukraine); . The adaptation of existing and the development of new curricula for training of building professionals; <p>Training and certification for a total of 90 trainers, 2,400 construction workers, 480 designers and 720 non-specialists</p>

	(representatives of public authorities, business managers, NGOs, consumer groups, media, etc.).
Context	
Objectives	<ul style="list-style-type: none"> . Development of publicly available Terms of Reference for the setting up of the BKHs; . Adaptation of existing and development of new training programs; . Actual setting up of 4 training and consultation centres (BKHs) according to the Terms of Reference; . Building of internal capacity through train-the-trainer activities, targeting at least 90 qualified trainers; . Actual training courses according to annual training plans, resulting in: (a) 120 training courses for construction workers, targeting additional qualification of 2400 trainees; (b) 24 training courses for highly-qualified building specialists, targeting additional qualification of 480 trainees; (c) 36 training courses for non-specialists, targeting additional qualification of 720 trainees; . Strict monitoring and evaluation for constant improvement of the offered services. . Setting up of a web-based networking platform providing facilities for knowledge sharing and exchange between the BKHs; . Conduction of a targeted dissemination and communication campaign to increase the market demand for NZEB projects.
Target skills/ professions	Targeting all stakeholders: professionals, academics, site managers, site workers, specialist workers, building owners and home owners.