



Welcome to the brand-new Building Knowledge Hubs of Europe!



The first half of 2017 was marked with the official opening of the 5 new Building Knowledge Hubs (BKH) supported by the Train-to-nZEB project (www.train-to-nzeb.com) - in Bulgaria, Romania, Turkey, the Czech Republic, and Ukraine. The unique holistic approach and the wide variety of training courses on offer in each of them serve as a strong guarantee that the BKHs

have great potential to become knowledge and skills exchange centers for modern design, construction and exploitation of energy efficient buildings that comply with the standards of the future decades.

The training centers form an international network that aims to create favorable conditions for specialized practical training of building professionals from all fields - researchers, designers, investors, construction managers and contractors, as well as central and local authorities' representatives and journalists. With the support of the local industry, we are looking forward to put our strong mark on the educational and training practice in the area of energy efficiency of buildings in Central and Eastern Europe - and beyond! Find out more at www.facebook.com/train2nzeb and www.twitter.com/Train2nZEB.



This project is supported by the Horizon 2020 Framework Programme of the European Union

Contents:

Bulgaria: our new home is the University of Architecture in the center of Sofia

Romania: The Centre for Energy Performance of Buildings is where we need to be

The Czech Republic: The way to nZEB is demonstrated in the ABF premises in Prague

Turkey: BKH-Izmir in Ege University shows how nZEB works in hot climates

Ukraine: Academia and business work together in the Kyiv National University of Construction and Architecture

Highlights from the ground

News from us and our partners

Bulgaria: Our new home is the University of Architecture, Civil Engineering and Geodesy (UACEG) in the center of Sofia



The opening ceremony of the newly established Building Knowledge Hub (BKH) Bulgaria, dedicated to energy efficiency and RES in buildings was held in the University of Architecture, Civil Engineering and Geodesy (UACEG) in Sofia - the host of the Hub - on May 16, 2017, welcoming more than 80 guests, including representatives of the national government, the construction and educational sectors. The attendance of representatives of numerous construction companies and building materials and components suppliers was received as a positive and encouraging sign. Furthermore, a number of vocational training centers also expressed the willingness to collaborate and organize joint trainings.

The new BKH facility incorporate and demonstrate the full range of modern technologies, products and materials necessary for constructing nZEBs, which is still relatively unknown by the building professionals in Bulgaria. Multiple training programs are offered - from BUILD UP Skills courses, through the internationally recognized Certified Passive House Tradesperson and Designer courses, courses for acquiring professional qualification under the national regulations, and short demonstration courses for investors and decision-makers. Virtually all topics connected to the nZEB are covered, including insulation and airtightness, window and facade systems, ventilation with heat recovery, contemporary heating and cooling systems, RES, renovation of existing buildings and many more.

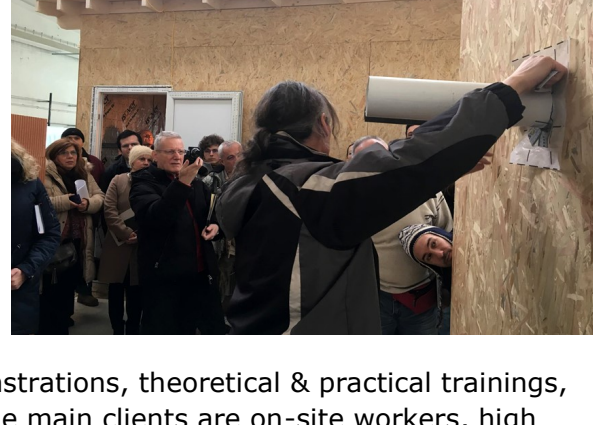
Training courses

Airtightness and infrared thermography; mechanical ventilation with heat recovery (MVHR); design and construction skills for delivering quality nearly Zero-Energy Buildings (nZEBs), RES installations in buildings - these are just few of the topics that are covered in the courses in the newly established BKH in Bulgaria. The courses already open for registration are one-click away and easily accessible at www.busenerpro.com/trainings, as many of the trainings are still either free of charge or with a very low participation fee.

On 17 May 2017, one day after the official opening, the Bulgarian BKH hosted a train-the-trainer course, led by Arch. Susanne Winkel, Passive House Institute - Darmstadt, Germany. The course was targeted at the Certified Passive House Tradesperson and Designer schemes, which, in addition to courses developed under the BUILD UP Skills initiative in Bulgaria, will play an important role in the BKH's marketing positioning.

Romania: The Centre for Energy Performance of Buildings within NIRD URBAN-INCERC is where we need to be

The Building Knowledge Hub Romania (BKH RO) was officially opened on October 20, 2016. It is located in the capital Bucharest at the existing Centre for Energy Performance of Buildings within NIRD URBAN-INCERC having support from project partners Business Development Group (BDG) and Fundatia pentru Formare Profesionala si Invatamant Preuniversitar-Viitor (FPIP) as well as other stakeholders and industry supporters including the Pro-nZEB Cluster. The opening ceremony was attended by 61 relevant participants (public authorities, construction companies, producers/suppliers of building materials & systems, architects, designers, engineers, energy auditors, universities & research institutes, building owners associations, etc.)



The main services provided by the BKH RO are technology demonstrations, theoretical & practical trainings, technical consultancy, R&D, technology integration, and nZEB. The main clients are on-site workers, high level specialists, designers and decision makers. The training courses are organized in-house and in partnership with in-house and external experts & trainers.

Trainings courses

Nearly zero energy buildings training courses have been structured for 3 categories of target groups (A - On-site Construction Crafts & Professions, B - Specialists, C - Non-specialists) based on individual modules, which could be used in different courses, in order to facilitate access to single or multiple courses with possibility to acquire tailor-made skills and competences linked to the qualification level and/or basic occupation. Assuming that participants in this process are familiar with the conventional practices in the building sector and already possess the relevant skills for the design of conventional buildings, the content is limited to essential additional knowledge related to nZEB. This knowledge is framed out in 20 modules, each with detailed description of knowledge and skills gained, competence acquired, learning outcomes, training aids and materials, evaluation procedure and total duration. A wealth of knowledge and didactic approach waits to be shared with future Train-to-nZEB network members. The first Train the Trainer (TTT) course was held on 8-9 February 2017 and it was attended by 51 participants. Furthermore, here is a list of the delivered, ongoing, and future trainings planned by the Romanian team:



Architects in Bucharest.

15-17 May 2017 - „Certified Passive House Tradesperson” course within NIRD URBAN-INCERC in Bucharest (24 attendants),

12 May-30 June 2017 - "Photovoltaic Panels Installer" training course within FPIP in Brasov (26 attendants),

23 June-10 August 2017, the 2nd "Photovoltaic Panels Installer" training course within FPIP in Brasov (28 attendants),

July and September 2017 - "Legal framework and concepts for nZEB" training course for decision makers,

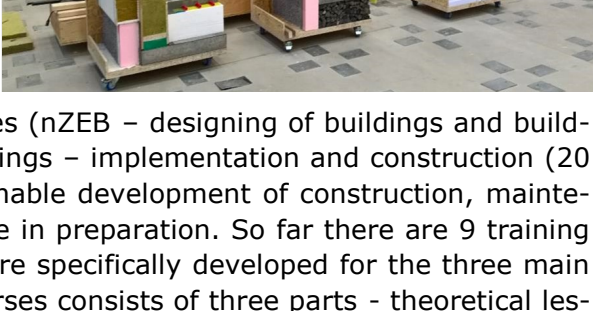
July 2017 - "Solar thermal systems" training course for on-site professionals within FPIP in Brasov,

August-September 2017 - 2 sessions planned for „Certified Passive House Tradesperson” course within NIRD URBAN-INCERC in Bucharest and Brasov,

October-November 2017 - "Passive House Designers" training course jointly organized by NIRD URBAN-INCERC and the Romanian Chamber of

The way to nearly zero-energy buildings is demonstrated in the Architecture and Building Foundation in the center of Prague

The CZ Building Knowledge Hub was opened on March 2, 2017 in Prague, Czech Republic. The grand opening was accompanied by the conference "The way to nearly zero energy buildings", combined with an exhibition of efficient technical solutions and materials (awarded by quality mark Product - technology 2017). It was conducted in the premises of the Architecture and Building Foundation (ABF), promising strong international participation with colleagues from Germany, Romania and Slovakia. Apparently, the first dedicated nZEB-related conference in the Czech Republic.

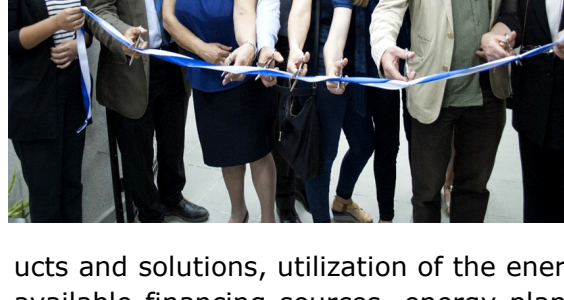


Training courses

For the moment the CZ BKH offers 3 specific training programmes (nZEB - designing of buildings and building technology (27 April-19 May 2017), Nearly zero energy buildings - implementation and construction (20 April - 2 June 2017), and Nearly zero energy buildings - sustainable development of construction, maintenance and use (14 March - 13 June 2017), and there are 2 more in preparation. So far there are 9 training courses, with 129 trained participants. The three programmes were specifically developed for the three main target groups: specialists, tradespeople, non-specialists. The courses consists of three parts - theoretical lessons, practical exercises and self-study with developed studying materials. end with a test and, once successfully completed, the participants are awarded a certificate. All courses were accredited by the Czech chamber of authorized engineers and technicians as a part of long-life education system, proposed by the Chamber to all engineers and technicians authorized in the Czech Republic. The future trainings will begin in September 2017.

Meanwhile the Czech team of experts is preparing practical training on wall design and evaluation of completed courses (tests, questionnaires, certificates etc.). Last but not least, there is a strong interest from local professional schools and universities for organized group visits.

The latest member: BKH-Izmir shows how nZEB works in hot climates



The Department of Civil Engineering at Ege University (Turkey) used its existing facilities and delivered the necessary demonstration models and training equipment in order to guarantee the best quality of the new BKH. It provides trainings for most crafts and professions related to nZEBs (building shell, building services and RES installation in buildings) and support for the building sector professionals (engineers, architects, municipality employees and decision makers) on delivering quality nZEB projects.

Additionally, the team sets itself the ambitious task to provide continuous technical, administrative and financial consultations for the different stakeholders' groups through case-specific consultations on integrated design, whole building nZEB design, new products on integrated design, whole building nZEB design, new products

ucts and solutions, utilization of the energy saving potential, optimization of the overall energy performance, available financing sources, energy planning for public authorities, etc., according to the national specifics and the capacity. Thus, engineers, architects, municipality employees and decision makers as well as their trainers in Turkey could be brought together through a unique portal, having significant impact on the construction industry in a large and fast-developing country.

Training courses

Following the opening ceremony of the TR BKH the team of experts organized TTT course on June 20, 2017. So far there were 4 courses for non-specialists in the period May-June 2017, with more than 150 participants in total. The future trainings for designers/engineers, construction workers and non-specialists are scheduled **to start in September 2017 and to continue until April 2018**. The training programmes are divided into 6 modules - nZEB basic, nZEB advanced, Retrofitting towards nZEB, nZEB simulation, Preparation of funding schemes, and Practice.

Academia and business work together in the Kyiv National University of Construction and Architecture

The Ukrainian Building Knowledge Hub is set up in Kyiv National University of Construction and Architecture (KNUCA, Ukraine). The future trainers are selected from a pool of leading experts in energy efficiency in construction and architecture and it is expected to mobilize the expertise of KNUCA and professionals from partner companies who participate in the development of norms and regulations and national building standards. In order to meet this goal, the project partner MDI mobilized support from a wide range of EE equipment and materials producers of windows, equipment for engineering networks, energy efficient heat insulation, energy efficient construction materials and equipment, facade systems, engineering networks, ventilation and air conditioning systems, alternative energy sources, protection from sunlight, design of energy efficient buildings, heating and ventilation systems, heat insulation and sound proof materials, ceramic materials and ware: blocks, bricks, tiles, other building envelope materials suitable for passive houses, building materials and aluminum structures, including structures for building envelope and translucent systems. With their assistance, detailed training programs were developed, using the experience and also the existing training facilities and laboratories of local manufacturers.



Training courses

The trainings started in October 2016 at the Ukrainian nZEB Center. Some workshops are carried out at manufacturing and training facilities of local Project partners - EE/materials producers/vendors, including the Training Center of REHAU. The activities include group work, class discussions, lectures combined with practical tasks, solving problems, and discussion of the proposed solutions. Special software is being used for problems on building physics and on modeling of energy efficient engineering systems. Training participants have the opportunity to use samples of EE materials/equipment available at the demonstration area at the Ukrainian nZEB Center.

So far the Ukrainian team of experts have conducted two training workshops: "Design and construction of nearly zero-energy buildings" for highly qualified building professionals (17-22.10.2016, Kyiv, Kiev). There were 22 participants - professionals, civil engineers, industrial engineers, architects, urban planning specialists, and specialists in GIS. The second workshop "Design engineer of nearly zero-energy buildings" for highly qualified building professionals (16-23.11.2016, Kiev) trained 23 professionals: construction engineers, specialists in industrial building construction and civilian construction, architects and urban development specialists, heating specialists, electrical engineers, and specialists in alternative energy sources.

The future training courses at the Ukrainian BKH have the following schedule:

September 2017 - training for building industry workers "Nearly Zero-Energy Buildings Construction Specialist" (44 hours),

October 2017 - training for building industry workers "Nearly Zero-Energy Buildings Construction Specialist" (44 hours),

November 2017 - advanced training for designers "Nearly Zero-Energy Buildings Project Designer" (44 hours), and

December 2017 - training for building industry workers "Nearly Zero-Energy Buildings Construction Specialist" or advanced training for non-specialist decision-makers "Nearly Zero-Energy Buildings Project Manager" (44 hours).

Highlights from the ground

Train-to-nZEB was proud to be presented as part of "Fast Track and Affordable nearly Zero Energy Buildings" (nZEBRA) conference in Wexford, Ireland, where the nZEB standard has become the norm for the public authorities. A great event showing firm dedication at all level of governance and the business sector. Find out more at www.nzebra.ie.

[Passive House Institute](http://www.elearning.passivehouse.com) developed an online training module for non-specialist audience, which was officially presented at the project meeting in Izmir on 19 June 2017. A timely input before the actual start of the trainings and demonstrations, you can check and use it for free at www.elearning.passivehouse.com.

The first Certified Passive House Tradesperson courses were organized by the project coordinator nEffect in the newly opened Bulgarian BKH. As an evidence of success, all participant later joined the specialized Airtightness and Pressurization Testing course conducted with the support of our trusted partners from [Hexagon-Build](http://www.Hexagon-Build).

The first certified PV Installer course was conducted in May 2017 in the Romanian BKH base in Brasov, under the coordination of project partner FPIP. The course was fully booked - and there is a waiting list for the next one as well, with people from other Romanian cities coming in. Hope this trend will continue!

Presentations from the opening of the Czech BKH and the conference "Way to Nearly Zero Energy Buildings" available here: <http://www.svn.cz/en/news-and-media/seminars-and-conferences-source/way-to-nearly-zero-energy-buildings>, including partner input from Romania (Horia Petran, URBAN-INCERC) and Germany (Camille Sifferlen, PHI) We'll take a look!

The project meeting and Train the Trainer course held by Art McCormack (PHA), Camille Sifferlen (PHI) and Elisabeth O'Brien (LIT) in Izmir, Turkey on 19-20 June were definitely one of the highlights of the project this year. Despite there are no legal nZEB obligations or regular practice, the interest by the local professionals convinced us we're on the right track!

Meetings of MDI and KNUCA with producers of EE equipment and materials were organized to establish partnerships and support the ABF. This resulted in 13 signed agreements and direct support by companies like URSA, Aclima, REHAU, Henkel Bautechnik, Danfoss, Wienerberger, Techno Alliance, Talisman, NDI ITEK, Vaillant, Royal House, Yakir Ltd., Caparol.

News from us and our partners

⇒ The 10th EU Exchange Meeting under the BUILD UP Skills initiative took place on 29-30 May 2017 in Rotterdam. It was open to BUILD UP Skills project coordinators and partners involved in the BUILD UP Skills Pillar I, completed and ongoing BUILD UP Skills Pillar II, and ongoing Horizon2020 construction skills projects. Train-to-nZEB was dedicatedly presented at the meeting, once again stating its willingness to cooperate with all other relevant initiatives. You can find more information about the initiative and EU exchange meetings at www.buildup.eu/en/skills, including our "smiling" presentation, which will be remembered for some time!

⇒ Train-to-nZEB had its own stand and live presentation at the 21st International Passive House Conference in Vienna (28-29 April 2017) - a world of motivation and inspirations, new partnerships and wealth of knowledge. Lots of insights we got there, but still, the message that it's all done for people and their quality of life, seems to be the most important one. We'll be [in Munich next year](http://www.munich-nzef.eu) as well!

⇒ Two major international events hosted presentations of Train-to-nZEB and its follow up Fit-to-nZEB this summer: the [European Sustainable Energy Week](http://www.construction-let-s-build-changes.eu) (with live streaming session) and the DG Growth conference "[Construction: Let's Build Changes](http://www.construction-let-s-build-changes.eu)". A nice company to be in, with representatives of EU and national governance institutions, major financing bodies and the personal participation of Mr. Maroš Šefčovič, Vice-President of the EC in charge of the Energy Union. Hope the word spreads and the importance of skills development in the construction sector takes its deserved place in the political and public agenda.

⇒ The logical continuation of Train-to-nZEB - Fit-to-nZEB (www.fit-to-nzeb.eu), a new Horizon 2020 project focusing on training for deep energy retrofit - started in June 2017, as the kick-off meeting was organized in Sofia on 11th July. Lots of opportunities for collaboration and spreading the BKHs network to other regions and countries. You can follow all major news about Fit-to-nZEB on our [Facebook](http://www.facebook.com) and [Twitter](http://www.twitter.com) accounts as well.



This project has received financing under Grant Agreement No 649810 of the Horizon 2020 Programme of the European Union.

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission is responsible for any use that may be made of the information contained therein.

Contact information:

Center for Energy Efficiency nEffect

Tel.: +359 2 963 17 14; Fax: +359 2 963 17 14; E-mail: eneffect@eneffect.bg

Dragomir Tzanav

Mob.: +359 882 493 110; E-mail: dtzanav@eneffect.bg

If you do not want to receive the Train-to-nZEB project newsletter, click [here](http://www.eneffect.bg).