



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649810.



Train-to-NZEB

The Building Knowledge Hubs

Set of Promotional Materials

Deliverable 5.4 of the

TRAIN-TO-NZEB project, financed under grant agreement No 649810 of HORIZON 2020 Programme of the EU

Responsible partner: PHI

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PROJECT POSTER

Project posters are used throughout the project, preserving the Train-to-NZEB visual identity but identifying the main strengths and achievements according to target audience. Here are some of the examples:



Tools and Methods



Train-to-NZEB

The Building Knowledge Hubs

Today we build NZEBs!

Do you want to know how?



One-stop-shop consulting services



Qualified trainers



Building Knowledge Hubs



On the road to NZEB

The Train-to-NZEB will bring the Nearly Zero-Energy Building concept closer to your city and home by establishing a network of training and consultation centers for energy efficiency and RES in buildings. Fueled with the best European knowledge on Passive House design and construction, it carries all the skills and advice you need to get your new NZEB project done. And if you get it right, the train will take you to the next one.

And, yes, there is a seat especially for you. It doesn't matter if you are a designer, a construction worker or you want to build your new Passive House: just get on the right coach and select your training. You'll learn things for buildings you don't know and you'll see things in buildings you haven't seen before. And if you want more, just tell us: we'll find the right answer, just for you.



The Building Knowledge Hubs

So where are our new training centers: the building knowledge hubs of Europe? We start with five of them: in Czech Republic, Romania, Bulgaria, Turkey and Ukraine. We already have our new official partners in Greece, Croatia and Italy. And yes, we very much rely on the Germany's Passive House Institute and Ireland's Passive House Academy and Limerick Institute of Technology. They are the best, you know. Not close enough for you? Check out our online training course at www.moodle.passive.de. Or even better, become our new partner!

See more at www.train-to-nzeb.com


Coordinator:

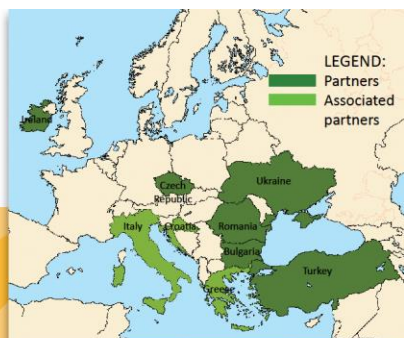


Partner:



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THE NEW BUILDING KNOWLEDGE HUBS OF EUROPE



Learn to build NZEBs!



On the road to NZEB

The Train-to-NZEB brings the Nearly Zero-Energy Building concept closer to you, your city, home and friends through a network of training and consultation centers (Building Knowledge Hubs) for energy efficiency and RES in buildings. Fully functional since 2016, they now offer high-quality certified Passive House training courses in 8 countries. And what is most important – they make people smile and come back for more. Happily.

See more at www.train-to-nzeb.com

Coordinator:



Author:

Dragomir Tzanev

Partner:



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PROJECT ROLL-UP

The project roll-up is used at major international dissemination events, e.g. International Passive House Conference (2016, 2017, 2018), C4E Forum, etc.

Training

Now we build NZEBs!

Do you want to know how?

KNOWLEDGE TRANSFER

Train-to-NZEB aims to transfer the knowledge and experience of leading research and training institutions from Germany (Passive House Institute) and several (Passive House Academy and - Institute of Technology) to 5 European countries – Bulgaria, Romania, the Czech Republic, Turkey and Ukraine.

In addition, the project team has already started to attract new members to the B2B networks, with the goal to stimulate knowledge sharing, and to continuously improve existing programmes and schemes. So, why don't you become one of us?

The project builds on the networking and results from the first two stages of the BUILD UP Skills initiative, under which many EU countries have already developed National Roadmaps for improving the knowledge and skills in the construction sector and currently prepare curricula for specific trainings.

Train-to-NZEB: The Building Knowledge Hubs

The "Train-to-NZEB" project aims to provide world class training on energy efficiency and RES in buildings, based on new training programmes, business plans and up-to-date training equipment for a set of training and consultation centers around Europe.

Its goal is to improve the knowledge and skills in the construction sector and to provide practical training, demonstrations and comprehensive consulting services for design and construction of nearly Zero Energy Buildings (NZEB) supported by RES, based on the Passive House concept.

The Building Knowledge Hubs will form an international network, providing trainings on the curricula developed under the European BUILD UP Skills initiative and by project partners, as well as certification opportunities for exchange, updating and improving of the existing training programmes. The modern training facilities will enable the conduct of practical exercises in addition to the theoretical programmes already available in the focus countries.

WHAT'S IN THERE FOR YOU?

It doesn't matter if you are a designer, a construction worker, a public official responsible for the city infrastructure, or you just want to build your new Passive House: there is a training and advice especially for you. With our up-to-date training programmes and materials coming from the world's leaders in sustainable building, you'll learn things for buildings you don't know yet. And with our new training facilities, demonstrations on tools and numerous partners from the construction industry, you'll see and touch things in buildings you probably haven't seen before. With this kind of knowledge, right decisions and successful projects would be easily within your reach. And if you need further advice for your own projects, we'll be there to help and ask the best. But first of all, why don't you give a hand of us?

www.train-to-nzeb.com

WHAT ARE OUR GOALS

The tasks of the project include design and equipment of a fully active training center (in Bulgaria, Romania, Turkey and the Czech Republic) and a pilot center (in Ukraine), as well as the adaptation of existing and the development of new curricula for training of building professionals.

Now we build NZEBs!

This will result in training and certification for a total of 50 trainers, 2,400 construction workers, 400 designers and (non) non-specialists (representatives of public authorities, business managers, NGOs, consumer groups, media, etc.).

All of these, combined with the provision of consulting services based on the "One-stop shop" principle, is expected to increase the interest and capacity for design and construction of NZEBs supported by RES in the focus countries and to stimulate the market demand for such solutions for both new buildings and building renovations.

www.train-to-nzeb.com



A Czech version was developed by SEVEN and used in the local events in Czech Republic.




Train-to-nZEB
 The Building Knowledge Hubs

Mezinárodní síť školicích center

Jaké jsou cíle školicích center?

Projekt Train-to-nZEB je zaměřen na poskytování prvotřídního školení v oblasti energetické účinnosti a obnovitelných zdrojů energie v budovách. Je založen na nových vzdělávacích programech a inovativním školicím vybavení vyvinutém významnými evropskými odborníky.

Mezinárodní síť

Vzdělávací centra formují mezinárodní síť poskytující školení vycházející z osnov evropské iniciativy BUILD UP Skills a rozvinutých partnerů projektu. Stejně tak pokračují příležitostmi pro výměnu, aktualizaci a vylepšení stávajících programů. Moderní vzdělávací zařízení umožní vést kromě teoretických programů i praktická cvičení, která jsou k dispozici v zúčastněných zemích.



Cílem je zlepšit znalosti a dovednosti ve stavebním sektoru a poskytovat praktická školení, ukázky a obsáhlé konzultační služby pro návrh a realizaci budov s téměř nulovou spotřebou energie (nZEB) podporované obnovitelnými zdroji energie (OZE) na základě konceptu pasivního domu.

Úkoly projektu zahrnují návrh a vybavení čtyř plně aktivních školicích center (v České republice, Bulharsku, Rumunsku a Turecku) a jednoho pilotního centra na Ukrajině. Součástí projektu je i adaptace stávajících a rozvoj nových osnov pro školicí kurzy stavebních odborníků. Výsledkem školení je certifikace celkem 90 školitelů, 2400 pracovníků na stavbách, 480 projektantů a 720 účastníků z řad širší veřejnosti (představitelů veřejné správy, obchodní manažerů, státní úředníků, spotřebitelské skupiny, média, atd.). Předpokládá se zvýšení zájmu a počtu návrhů na realizaci budov s téměř nulovou spotřebou energie, podporované obnovitelnými zdroji energie, díky školení v kombinaci s poskytováním konzultačních služeb založených na principu „one-stop“.

Cílem je vzdělat v ČR:

- 600 pracovníků na stavbách
- 120 projektantů a architektů
- 180 účastníků z řad širší veřejnosti

Tematické zaměření kurzů:

- Budovy s téměř nulovou spotřebou energie
- Křížení řemesel (mezioborové dovednosti)
- BIM (Building Information Modelling)
- Integrovaný návrh
- Obnovitelné zdroje energie
- Udržitelný rozvoj výstavby




www.svn.cz

Další informace na projektovém webu:
www.train-to-nzeb.com

Koordinator:

Partneři:








This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101019151.




Train-to-nZEB
 The Building Knowledge Hubs

Kurzy

Train-to-nZEB

Znáte již nZEB – nearly Zero Energy Buildings ?

Víte o povinnosti stavět od roku 2020 pouze budovy s téměř nulovou spotřebou energie ?

Zvyšte si konkurenceschopnost a zlepšete si u nás své odborné znalosti a dovednosti v oblasti nZEB.

Nezáleží na tom, zda jste stavební inženýr, projektant, stavební dělník nebo si jen chcete postavit nový dům s téměř nulovou spotřebou energie – k dispozici jsou **školení a konzultace speciálně pro Vás.**



Staňte se s námi odborníky na budovy s téměř nulovou spotřebou energie.

S našimi aktuálními školicími programy a materiály od evropských odborníků na udržitelnou výstavbu, se naučíte rozumět budovám s téměř nulovou spotřebou energie. S novými znalostmi budete mít jednoduše na dosah správná rozhodnutí a úspěšné projekty. Zajištění i poradenství pro Váš vlastní projekt, pomůžeme Vám a nejlépe poradíme.




Kurzy projektu Train-to-nZEB jsou určeny pro:

- pracovníky na stavbách,
- projektanty a architekty,
- stavební inženýry,
- energetické specialisty,
- širší veřejnost, úředníky, média, ...

Co Vám mohou kurzy nabídnout?

- Zvýšení odborné kvalifikace a teoretických znalostí
- Zlepšení praktických dovedností pomocí názorných ukázek
- Cvičení na výukových modelech stavebních konstrukcí
- Certifikát za úspěšné absolvování kurzu
- Setkání s odborníky v oblasti nZEB a výměnu zkušeností




Aktuální nabídka kurzů:
www.stavebniakademie.cz

Podívejte se a přesvědčte se na: www.train-to-nzeb.com

Koordinator:

Partneři:








This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101019151.



A Romanian Version was developed by the Romanian Team of partners for local use.

Building Knowledge Hub (BKH) România
Centru de Formare Profesională și Consultanță pentru Clădiri
cu Consum de Energie Aproape Egal cu Zero (nZEB)

**Train-to-nZEB**
The Building Knowledge Hubs

Conectați-vă la BKH!**Sprîjiți construcția de clădiri cu consum de energie aproape egal cu zero!****DEZVOLTAREA ȘI PROMOVAREA IMPLEMENTĂRII CONCEPTULUI nZEB ÎN ROMÂNIA**

Crearea unei rețele profesionale de cunoaștere și formare pentru implementarea nZEB.

Implementarea pe scară largă a schemelor de specializare și calificare.

Promovarea programelor de formare continuă, cu accent pe proiectarea integrată a clădirilor nZEB.

**CUI NE ADRESĂM?**

Lucrătorilor în construcții (pe șantier)

Specialiștilor (arhitecți, proiectanți, experți, auditori energetici etc)

Factorilor de decizie (responsabili în administrația publică, instituții de finanțare, proprietari, dezvoltatori și agenți imobiliari)

Contact BKH România**București**
INCD URBAN-INCERC (Coordonator)
Centrul de Performanță Energetică a Clădirilor
Adresă: Șos. Pantelimon 266, București
Tel.: 0040 21 255 08 35
Fax: 0040 21 255 00 62
E-mail: train-to-nzeb@incd.ro
Web: www.incld.ro**Brașov**
Fundatia FIIP-Vitor
Clădirea GREEN CENTER
Str. Brînduseilor nr. 74, etaj 3, BIROU 8
Tel: 0040 721318120
E-mail: nzeb@calificat.ro
Web: www.calificat.ro**Cursuri pentru toate categoriile de persoane interesate**

Concepte și principii de proiectare și realizare a clădirilor cu consum de energie aproape egal cu zero (nZEB)

Anvelopa Clădirii în nZEB (sisteme de izolare termică + tâmplărie termoizolantă)

Etanșeitatea la aer în nZEB

Instalații în nZEB (încălzire / răcire, ventilație cu recuperare a căldurii, monitorizarea performanței energetice)

Sisteme de utilizare a energiei din surse regenerabile

Performanța energetică a nZEB (proiectare integrată și eficiență energetică)

Principii de eficiență economică pentru nZEB (principii de optimizare a costurilor totale)

www.train-to-nzeb.com

Coordonator:

Parteneri:



PROJECT FLYER

The project flyer was prepared, printed and disseminated in 2000 copies in English and then replicated in most project languages for local dissemination goals. Here are some of the examples:

Flyer in English

training

OUR PROJECT

**Train-to-NZEB:
The Building Knowledge Hubs**



The "Train-to-NZEB" project aims to provide world-class training on energy efficiency and RES in buildings, based on new training programmes, business plans and up-to-date training equipment for a set of training and consultation centers around Europe.

Its goal is to improve the knowledge and skills in the construction sector and to provide practical trainings, demonstrations and comprehensive consulting services for design and construction of Nearly Zero-Energy Buildings (NZEB) supported by RES, based on the Passive House concept.

The Building Knowledge Hubs will form an international network, providing trainings on the curricula developed under the European BUILD UP Skills Initiative and by project partners, as well as continuous opportunities for exchange, updating and improving of the existing training programmes. The modern training facilities will enable the construction of practical exercises in addition to the theoretical programmes already available in the focus countries.

WHAT'S IN THERE FOR YOU?



NZEBs are built by those who can!

It doesn't matter if you are a designer, a construction worker, a public official responsible for the city infrastructure, or you just want to build your new passive house: there is a training and advice especially for you. With our up-to-date training programmes and materials coming from the world's leaders in sustainable building, you'll learn things for buildings you don't know yet. And with our new training facilities, demonstration tools and numerous partners from the construction industry, you'll see and touch things in buildings you probably haven't seen before. With this kind of knowledge, right decisions and successful projects would be easily within your reach. And if you need further advice for your own project, we'll be there to help and ask the best.

But first of all, why don't you get a taste of it at:

www.train-to-nzeb.com/pedia.rte

WHAT ARE OUR GOALS?

The tasks of the project include design and equipment of 4 fully active training centers (in Bulgaria, Romania, Turkey and the Czech Republic) and 1 pilot center (in Ukraine), as well as the adaptation of existing and the development of new curricula for training of building professionals.

Now we build NZEBs!

This will result in training and certification for a total of 90 trainers, 2,400 construction workers, 480 designers and 720 non-specialists (representatives of public authorities, business managers, NGOs, consumer groups, media, etc.).

Train-to-NZEB
The Building Knowledge Hubs

All of these, combined with the provision of consulting services based on the „One-stop shop“ principle, is expected to increase the interest and capacity for design and construction of NZEBs supported by RES in the focus countries and to stimulate the market demand for such solutions for both new buildings and building renovations.

training

OUR NETWORK

Knowledge transfer

Train-to-NZEB aims to transfer the knowledge and experience of leading research and training institutions from Germany (Passive House Institute) and Ireland (Passive House Academy and Limerick Institute of Technology) to 5 European countries – Bulgaria, Romania, the Czech Republic, Turkey and Ukraine.

In addition, the project team has already started to attract new members in the BKH's network, with the goal to stimulate knowledge sharing and to continuously improve the training programmes and schemes. So, why don't you become one of us?

The project builds on the networking and results from the first two stages of the BUILD UP Skills initiative, under which many EU countries have already developed National Roadmaps for improving the knowledge and skills in the construction sector and currently prepare curricula for specific trainings.



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www.train-to-nzeb.com

Now we build NZEBs!

Do you want to know how?



Train-to-NZEB
The Building Knowledge Hubs

обучения

ЗА ПРОЕКТА

Train-to-NZEB:
Новите европейски центрове за енергийна ефективност и ВЕИ в сградите

Проектът Train-to-NZEB има за цел да играе и оборудва международна мрежа от учебни и консултантски центрове за подобряване на знанията и уменията в областта на сградите. Те ще предоставят практически обучения, демонстрации и комплексни консултантски услуги за проектиране и строителство на почти нулево енергийни сгради (ПНЕС).

Новите центрове ще предоставят обучения по програмите, разработени в рамките на европейската инициатива BUILD UP Skills. Те ще разполагат със съвременни условия за провеждане на практически упражнения и ще привличат значителен брой проектианти и строителни специалисти, които досега са били извън обсега на програмата.

Учебните центрове ще изградят международна мрежа, която ще осигурява възможности за постоянен обмен и за актуализиране и усъвършенстване на съществуващите учебни програми. Съвременното оборудване ще позволи провеждането на практически упражнения в допълнение към теоретичните програми, които вече са на разположение на партньорите по проекта.

КАКВО ЩЕ НАМЕРИТЕ ПРИ НАС?



Днес строят тези, които знаят как!

Независимо дали сте проектирант, строителен експерт, работник, общински специалист, или просто мечтаете да построяте своята нова пасивна къща: нашият проект предлага обучения и консултации специално за Вас. Чрез нашите съвременни учебни програми и материали, разработени от европейски лидери в областта на устойчивото строителство, със сигурност ще научите нови и непознати факти за енергийната ефективност в сградите. А чрез нашите нови учебни съоръжения, демонстрационни модели и многобройни партньори от строителния бранш ще се запознаете и ще се докоснете до строителни материали и изделия, които малцина са виждали преди. Придобитите знания ще направят правилните решения и успешните начинания много по-лесни. Ако имате нужда от допълнителна помощ за своя собствен проект, ние ще сме там, за да помогнем или да потърсим съвет от най-добрите.

Но преди всичко, защо не разгледате нашия уебсайт и платформа за дистанционно обучение? Намерете ни на

www.train-to-nzeb.com/pedia.de

КАКВО ИСКАМЕ ДА ПОСТИГНЕМ?

Проектът ще осигури проектирането и оборудването на 5 учебни центъра (в България, Румъния, Турция, Чехия и Украйна), както и адаптирането на съществуващи и разработването на нови учебни програми за проектианти, строителни специалисти и други заинтересувани участници.

Днес строим пасивни сгради!

Ще бъдат обучени общо 90 преподаватели, 2400 строителни работници, 480 проектианти и 720 неспециалисти, участващи във вземането на решения в проектирането и строителството (представители на публичната власт, бизнес мениджъри, НПО, потребителски групи, медии и др.).

Train-to-NZEB
The Building Knowledge Hubs

Всичко това, в съчетание с консултантските услуги на принципа „Обслужване на едно гише“ („One-stop shop“), се очаква да увеличи интереса и уменията за проектиране и строителство на ПНЕС с инсталации за ВЕИ и да насърчи пазарното търсене за подобни решения както при строителството на нови сгради, така и при обновяването на съществуващи.

обучения

НАШАТА МРЕЖА

Трансфер на знания

Train-to-NZEB е първият международен проект в областта на енергийната ефективност по програма Хоризонт 2020, който се ръководи от българския партньор – Център за енергийна ефективност ЕнЕфект. Заедно с ЕнЕфект, партньори по проекта от българска страна са Камарата на строителите в България и Би Сис ООД. Международното участие е изключително силно, като освен традиционния партньор на ЕнЕфект – Институт Пасивна къща (Дармщат, Германия), за участие са привлечени едни от най-авторитетните организации в областта на енергийната ефективност и ВЕИ от Ирландия, Чехия, Румъния, Турция и Украйна.

За да насърчи споделянето и разпространяването на знания и умения, екипът на проекта вече започна да привлича нови членове – представители на Италия, Гърция, Хърватия и др. Заедно с това, продължава и усъвършенстването на учебните програми. Вие също можете да се включите!

Проектът е естествено продължение на първите два етапа на инициативата BUILD UP Skills, в рамките на които много страни от ЕС разработиха национални пътни карти за повишаване на знанията и уменията за проектиране и изграждане на ПНЕС, както и за придобиване на квалификация по енергийна ефективност и използване на възобновяема енергия в сградите.

ЗА КОНТАКТИ

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Партньори:



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Този проект е финансиран по програма Хоризонт 2020 на ЕС-чия договор за безвъзмездна финансова помощ No 649810.

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НАУКОВО-ОСВІТНІЙ ЦЕНТР ПРОЕКТУВАННЯ ТА ДОСЛІДЖЕННЯ БУДІВЕЛЬ ІЗ БЛИЗЬКИМ ДО НУЛЬОВОГО ЕНЕРГОСПОЖИВАННЯ

ЄВРОПЕЙСЬКИЙ ДОСВІД
ПРОЕКТУВАННЯ ТА ЗВЕДЕННЯ
БУДІВЕЛЬ ІЗ БЛИЗЬКИМ ДО
НУЛЬОВОГО ЕНЕРГОСПОЖИВАННЯ

У 2015 році стартував Проєкт «Підготовка спеціалістів зі зведення будівель із близьким до нульового енергоспоживання: інформаційні інженерно-будівельні центри знань» (TRAIN-TO-NZEB). Проєкт фінансується Європейським Союзом у рамках Програми з розвитку наукових досліджень та технологій «Горизонт 2020» (угода про надання гранту №649810).

В Україні Проєкт впроваджує Всеукраїнська благодійна організація «Інститут місцевого розвитку». Уся діяльність, що здійснюється в рамках Проєкту в Україні, націлена на поліпшення професійних знань вітчизняних спеціалістів у сфері енергоефективності в будівництві й архітектурі, а також на підвищення рівня обізнаності усіх зацікавлених у цьому питанні осіб.

У рамках Проєкту в Україні створюється Науково-освітній центр проектування та дослідження будівель із близьким до нульового енергоспоживання, на базі якого планується подальша підготовка професійних кадрів будівельного профілю через проведення спеціалізованих курсів на тему «Будівлі із близьким до нульового енергоспоживання» (Nearly Zero-Energy Buildings – NZEB).

Досвід, який отримають учасники тренінгів, відобразатиме всі аспекти передових європейських практик енергоефективного проектування і зведення будівель та споруд.

Саме тому важливою є європейська підтримка Проєкту іноземними партнерами, що представлені 11 виконавцями Проєкту з шести країн світу. У Болгарії, Чехії, Румунії і Туреччині створюються аналогічні тренінгові центри, які після завершення Проєкту разом із Центром в Україні, Інститутом пасивного будинку (Passive House Institute, Німеччина) та Академією пасивного будинку (Passive House Academy, Ірландія) утворять міжнародну мережу, орієнтовану на постійний трансфер технологій і знань з енергоефективності в будівництві й архітектурі. Також передбачається організація інформаційних заходів: конференцій, семінарів, презентацій тощо, які мають на меті популяризацію концепцій будівель із близьким до нульового енергоспоживання та пасивних будинків серед широких верств населення.

ВИКОНАВЦІ ПРОЕКТУ І ПАРТНЕРИ ПРОЕКТУ В УКРАЇНІ

Виконавці Проєкту:

1. Інститут пасивного будинку (Passive House Institute, Німеччина).
2. Академія пасивного будинку (Passive House Academy, Ірландія).
3. Лімерікський технологічний інститут (Limerick Institute of Technology, Ірландія).
4. Центр енергоефективності ЕнЕфект (Center for Energy Efficiency - Eneffect, Болгарія).
5. Науково-дослідний інститут конструкцій та економіки будівель, містобудування і територіального планування та стійкого розвитку (URBAN INCD INCERC, Румунія).
6. Група з розвитку бізнесу (Business Development Group - BDG, Румунія).
7. Егейський університет (Ege Üniversitesi, Туреччина).
8. Центр енергоефективності - SEVEN (Чехія).
9. Компанія B SYS (B SYS Ltd., Болгарія).
10. Будівельна палата (Bulgarian Construction Chamber, Болгарія).
11. Фонд професійної освіти та підготовки до вступу до ВНЗ (Fundatia Pentru Formare Profesionala Si Invatamant Preuniversitar-Viitor, Румунія).
12. B60 «Інститут місцевого розвитку» (Україна).

Партнери Проєкту в Україні:



В якості місцевого учасника та головного партнера у впровадженні Проєкту в Україні бере участь найавторитетніший у галузі проектування та будівництва вищий навчальний заклад держави – Київський національний університет будівництва і архітектури (КНУБА), який надає необхідні приміщення, кадрову підтримку та матеріально-технічне забезпечення для функціонування Центру і здійснення всіх навчально-інформаційних заходів за Проєктом.



ЗАПРОШУЄМО НА ПРОФЕСІЙНІ ТРЕНІНГОВІ КУРСИ



Професійних будівельників

Пропонуємо вам ознайомитися з усіма практичними аспектами зведення та експлуатації будівель із близьким до нульового енергоспоживання. У рамках навчання розглядатимуться ключові питання вибору сучасних енергоефективних матеріалів, конструктивних рішень та інженерного технологічного обладнання з урахуванням нормативних вимог до теплоізоляційної оболонки й теплозабезпечення будинку. Висвітлюватимуться питання вибору ефективних систем вентиляції й кондиціонування приміщень, джерел теплопостачання будівлі, у тому числі на основі відновлюваних та альтернативних джерел енергії.



Проектувальників

Ми запрошуємо архітекторів, конструкторів, інженерів, теплотехніків та інших висококваліфікованих виконавців проектно-будівельної документації перейняти європейський досвід енергоефективних проектних рішень у будівництві й архітектурі. Разом із вами ми розглянемо методологічні аспекти проектування енергоефективних екологічних будівель, поглиблені інженерні розрахунки ефективних конструкцій із застосуванням сучасного програмного забезпечення, а також принципи комплексного застосування енергоощадних систем вентиляції, кондиціонування, опалення й теплопостачання в поєднанні з альтернативними джерелами енергії за стандартами «пасивного», «нульового» та «активного» будівництва.



Осіб, що можуть вплинути на прийняття рішень

Керівникам проектних та будівельних організацій, представникам муніципалітетів і державних установ, комунальних підприємств, виробникам і дистрибуторам будівельних матеріалів, представникам ОСББ, ЗМІ, громадських і благодійних організацій пропонується пройти спрощений інтенсивний курс. За результатами тренінгу ви підкажете об'єктивність щодо техніко-економічних та законодавчих аспектів системного впровадження енергоефективних заходів, технологій і матеріалів у будівельне виробництво, нормативних вимог енергоефективності в будівництві, встановлення енергоощадних систем опалення, тепло-, водо-, електропостачання й вентиляції у нових та старих будинках, сертифікації й енергетичного аудиту, а також комплексного підняття енергоефективності наявного житлового фонду.

ІНФОРМАЦІЙНО-ОСВІТНІ ЗАХОДИ ПРОЕКТУ



Конференції

Студенти, молоді вчені та всі зацікавлені в енергоефективних технологіях особи мають нагоду взяти участь у щорічних міжнародних науково-практичних конференціях «Інтегровані енергоефективні технології в архітектурі та будівництві: «ЕНЕРГОІНТЕГРАЦІЯ» та «БУД-МАЙСТЕР-КЛАС», які проводяться за підтримки ВОО «Інститут місцевого розвитку» на базі КНУБА.

Тематика конференцій охоплює такі питання:

- енергоефективна архітектура і містобудування, сучасні енергоефективні конструктивні рішення та матеріали;
- математичне та комп'ютерне моделювання в дослідженні об'єктів, процесів та систем енергозбереження;
- розвиток законодавчої бази в галузі енергоефективності;
- енергоменеджмент та економіка енергоспоживання;
- енергоефективні системи й технології енергогенерації, транспортування та споживання енергії;
- комп'ютерні технології проектування і розрахунку систем теплопостачання;
- технології нетрадиційних та відновлюваних джерел енергії в енергоощадній архітектурі та будівництві;



Консультування й технічна допомога

У рамках Проекту Інститут місцевого розвитку проводить інформаційно-освітні практичні семінари та зустрічі із провідними виробниками сучасних енергоефективних будівельних матеріалів і обладнання, а також спільно з КНУБА – консультації для всіх зацікавлених осіб. Усім охочим пропонується відвідати лабораторії та навчальні центри компаній-партнерів Проекту в Україні.

Ми підкажемо Вам, як спроектувати й побудувати власний пасивний будинок.



НАШІ КОНТАКТИ

Науково-освітній центр проектування та досліджень будівель з близьким до нульового споживанням енергії у КНУБА
просп. Північнобульварний, 31, 5-й поверх, ауд. 506-510
м. Київ 03680
Контактна особа:
Володимир Скочко, координатор Проекту в КНУБА, керівник Центру
Тел.: (067) 804 4918
Ел. пошта: train.to.nzeb@gmail.com

Виконавець Проекту в Україні
Всеукраїнська благодійна організація «Інститут місцевого розвитку»
вул. Ігорівська, 14-а, м. Київ 04070
Контактна особа:
Руслан Тормосов, виконавчий директор
Тел.: (044) 428 7610, 11
Ел. пошта: office@mdi.org.ua

АНКЕТА УЧАСНИКА

Анкети учасників просимо надсилати для кожного слухача окремо на поштову адресу або електронну пошту Інституту місцевого розвитку: office@mdi.org.ua

1. П.І.Б. _____
2. Місце роботи (організація) _____
3. Посада _____
4. Спеціальність за дипломом _____
5. Телефон _____
6. Електронна адреса _____
7. Поштова адреса _____

БУДЕМО РАДІ БАЧИТИ ВАС ТА ВАШИХ КОЛЕГ!

Flyer in Romanian



Train-to-NZEB
The Building Knowledge Hubs

Building Knowledge Hub (BKH) România

Centru de Consultanță și Formare Profesională pentru Clădiri cu
Consum de Energie Aproape Egal cu Zero (NZEB)

LISTĂ CURSURI

Lucrători în construcții (pe șantier)

1. Anvelopa Clădirii în NZEB (sisteme de izolare termică + tâmplărie termoizolantă)
2. Anvelopa Clădirii în NZEB (punți termice)
3. Instalații aferente clădirii (HVAC) în NZEB
4. Instalații Termice Solare
5. Instalații pe biomasă pentru încălzirea spațiilor și prepararea apei calde de consum
6. Instalații cu pompe de căldură
7. Sisteme mini-eoliene pentru clădiri
8. Etanșeitatea la aer în NZEB
9. Sisteme de ventilație cu recuperarea căldurii în NZEB
10. Montator (instalator) sisteme PV (PVTRIN)



Specialiști (arhitecți, proiectanți, experți, auditori energetici etc.)

1. Concepte și principii de proiectare a clădirilor cu consum de energie aproape egal cu zero (NZEB)
2. Performanța energetică în NZEB (proiectare integrată și eficiență energetică)
3. Sisteme de utilizare a surselor regenerabile de energie în NZEB
4. Instalații aferente clădirii în NZEB. Încălzirea spațiilor și ventilație mecanică cu recuperarea căldurii
5. Anvelopa Clădirii (principii și sisteme de izolare termică, punți termice, etanșeitate la aer) pentru NZEB

Factori de decizie (responsabili în administrația publică / instituții de finanțare, proprietari, dezvoltatori și agenți imobiliari etc.)

1. Cadrul legal și concepte pentru realizarea NZEB
2. Principii de eficiență economică pentru NZEB (principii de optimizare a costurilor totale)
3. Anvelopa Clădirii în NZEB (izolare termică, tâmplărie, punți termice și etanșeitate la aer)
4. Instalații aferente clădirii în NZEB (încălzire / răcire, ventilație cu recuperarea căldurii, monitorizarea performanței energetice)
5. Sisteme de utilizare a surselor regenerabile de energie în NZEB
6. Clădirea cu consum de energie aproape egal cu zero în conceptul de clădire verde

CONTACT BKH România

URBAN
INCD
INCERC

INCD URBAN-INCERC (Coordonator)
Centrul de Performanță Energetică a Clădirilor
Adresă: Șos. Pantelimon 266, București
Tel.: 0040 | 21 255 08 35
Fax: 0040 | 21 255 00 62
E-mail: train-to-nzeb@incd.ro
Web: www.incld.ro

www.train-to-nzeb.com

URBAN
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BIG
Business Development Group

FPI
EUROPEAN UNION

Acest proiect a primit finanțare din partea Programului Uniunii Europene pentru cercetare și inovare Orizont 2020 în temeiul acordului de grant nr. 649810





Viitorul este NZEB!

Proiectul *Train-to-NZEB: The Building Knowledge Hubs* se derulează în perioada 1 iunie 2015 – 31 mai 2018 în cadrul Programului Uniunii Europene pentru cercetare și inovare Orizont 2020 și urmărește dezvoltarea unei rețele de centre de formare profesională (Building Knowledge Hubs – BKH) pentru furnizarea de cursuri practice, demonstrații și servicii de consultanță complexă cu accent pe proiectarea integrată a clădirilor pentru realizare NZEB.

Sprijiniți construcția de clădiri cu consum de energie aproape egal cu zero!

Conectați-vă la BKH!

BKH România vă oferă:

- programe de formare profesională în domeniul NZEB pentru:
 - lucrători în construcții (pe șantier)
 - specialiști (arhitecți, proiectanți, experți, auditori energetici etc.)
 - factori de decizie (responsabili în administrația publică / instituții de finanțare, proprietari, dezvoltatori și agenți imobiliari etc.)
- servicii de consultanță complexă pentru implementarea clădirilor cu consum de energie aproape egal cu zero (NZEB)



**Alegeți cele mai bune programe de formare profesională în domeniul NZEB!
Alegeți BKH!**

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eğitim

PROJE

YSEB Eğitimi (Train-to-NZEB): Bina Bilgi Merkezleri

"Train-to-NZEB" projesi Avrupa'da bir dizi eğitim ve danışma merkezinde enerji verimliliği ve yenilenebilir enerji kaynakları konularında yeni eğitim programları, iş planları ve güncel eğitim araçlarını kullanarak, dünya standartlarında eğitim vermeyi amaçlamaktadır.



Pasif Ev Konseptine bağlı olarak, projede, yenilenebilir enerji kaynakları ile desteklenen Yaklaşık Sıfır Enerjili Binalar (YSEB) konusunda inşaat sektörünün bilgi ve becerilerinin geliştirilmesi, pratik eğitimlerin verilmesi, demonstrasyonların yapılması ve kapsamlı danışmanlık hizmetlerinin verilmesi amaçlanmaktadır.

Bina Bilgi Merkezleri BUILD UP Skills ve proje ortakları tarafından belirlenen müfredatı dahilinde eğitimler yapılması ve bu eğitim programlarının sürekli güncellenmesi ve geliştirilmesine yönelik uluslararası bir ağ oluşturulmasını sağlayacaktır. Modern yöntemlerle eğitimlerin yapılacağı bu merkezlerin kurulacağı ülkelerde eğitim programları, teorik programlara ek olarak pratik uygulamaları da içerecektir.

KAPSAM



YSEB ancak bilimler tarafından yapılabilir!

Tasarımcı/uzman, inşaat işçisi, altyapıdan sorumlu bir yetkili veya kendi pasif evini inşa etmek isteyen sade bir vatandaş olmanız farketmiyor: size özel eğitim müfredatı ve önerilerimiz var. Sürdürülebilir bina konusunda dünyadaki öncü kuruluşlardan elde edilen güncel eğitim programları ve materyaller kullanılarak, binalar hakkında bilmediklerinizi öğreneceğiniz taahhüt ediyoruz. Yeni eğitim olanaklarımız, demonstrasyon araçlarımız ve inşaat sektöründeki destekçi firmalarımız aracılığı ile, binalarda daha önce görmediğiniz detayları uygulamalı olarak göreceğiniz düşünüyoruz. Bu eğitimlerde edinilen bilgiler ile, daha doğru kararlar ve başarılı projelere imza atmak mümkün olacaktır. Projeniz için yeni fikirler ihtiyacı duyarsanız, yardım etmek için elimizden geleni yapacağız.

Aağıdaki bağlantıdan proje ile ilgili daha ayrıntılı bilgi alabilirsiniz:

www.train-to-nzeb.com

AMAÇLAR

4 eğitim merkezinin (Bulgaristan, Romanya, Türkiye ve Çek Cumhuriyeti) ve bir pilot eğitim merkezinin (Ukrayna) tasarımının yapılması, demonstrasyon modelleri yerleştirilmesi, aynı zamanda varolan eğitim programlarının adaptasyonu ve yeni eğitim program müfredatlarının geliştirilmesi, bu programlar ile inşaat sektöründeki kişilerin eğitimi de projedeki görevlerimiz arasında yer almaktadır.

Artık YSEB yapabiliyoruz!

Sonuçta toplam olarak 90 eğitimci, 2400 inşaat işçisi, 480 tasarımcı/mühendis ve 720 uzman olmayan sektör çalışanına (kamu ve özel sektör çalışanı, yöneticiler, tüketiciler, medya, v.b.) eğitim ve sertifikalar verilecektir.

Train-to-NZEB

The Building Knowledge Hubs

Ek olarak, "Tek duraklı hizmet anlayışı" prensibine dayalı danışmanlık hizmetlerinin verilmesi, bu ülkelerde, yenilenebilir enerji kaynakları ile desteklenen YSEBlerin tasarım ve inşaatına ilgili arttırması, aynı zamanda yeni binalarda ve mevcut binalarda enerji etkin iyileştirme ile bu konudaki sektörel talebi canlandırması beklenmektedir.

eğitim

AĞ

Bilgi aktarımı

Train-to-NZEB (yaklaşık Sıfır Enerjili Bina-YSEB için eğitim) projesi Almanya ve İrlanda Cumhuriyeti'nin önde gelen araştırma ve eğitim kurumlarında (Passive House Institute, Passive House Academy ve Limerick Institute of Technology) edinilen bilgi ve deneyimlerin Avrupa'ya (Bulgaristan, Romanya, Çek Cumhuriyeti, Türkiye ve Ukrayna) aktarımını amaçlamaktadır.

Bununla birlikte, BKH ağında projenin "bilgi paylaşımı, eğitim program ve şemasının sürekli geliştirilmesi konularında harekete geçmek" amacı dahilinde proje ekibi genişlemeye devam etmektedir. Katılımınız projeye değer katacaktır.

Proje, pek çok AB ülkesinin eğitim müfredatlarının hazırlanması, aynı zamanda inşaat sektörünün bilgi ve becerilerinin geliştirilmesi kapsamında ulusal yol haritalarının hazırlandığı BUILD UP SKILLS'in ilk iki aşamasındaki ağ oluşturma ve elde edilen sonuçların oluşturduğu temel üzerine tasarlanmıştır.



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Bu broşürün içeriği ile ilgili sorumluluk yazılara aittir ve Avrupa Birliği'nin görüşlerini bütünüyle yansıtmayabilir. EACI ve Avrupa Komisyonu bu broşürde verilen bilgilerden sorumlu tutulamaz.

Proje Avrupa Birliği'nin Horizon 2020 araştırma ve teknolojik gelişim programından 649810 nolu sözleşme ile destek almıştır.

www.train-to-nzeb.com

Artık YSEB yapabiliyoruz!

Nasıl mı? Bilmek ister misiniz?



Train-to-NZEB

The Building Knowledge Hubs

training

UNSER PROJEKT

**Train-to-NZEB:
The Building Knowledge Hubs**

Das "Train-to-NZEB" Projekt zielt auf eine bestmögliche Ausbildung zu Energieeffizienz und Erneuerbaren Energie im Gebäudebereich. Dazu werden neue Trainingsprogramme zusammengestellt sowie Businesspläne und zeitgemäße Einrichtungen für eine Reihe von hochklassigen Trainings- und Beratungszentren in Europa erstellt.

Das Ziel ist eine Verbesserung des Wissens und Könnens der Bauschaffenden indem **Ausbildung, Anschauungsobjekte und umfangreiche Beratungsangebote** zu Entwurf und Bau von nahezu Nullenergie-Gebäuden (NZEB) in Kombination mit erneuerbaren Energien auf Grundlage des Passivhaus-Konzeptes angeboten werden.

Die Ausbildungs- und Beratungszentren werden einen internationalen Verbund darstellen und in ihren Trainingsangeboten die in der europäischen BUILD UP Skills Initiative erkannten Inhalte umsetzen. Dabei entsteht eine fortlaufende Möglichkeit zum Austausch von Erfahrung und Material, sowie der kontinuierlichen Verbesserung der Angebote. Die hochmodernen Ausbildungsstätten werden über die theoretische Lehre hinaus, die in vielen Ländern bereits Fortschritte gemacht hat, insbesondere praktische Übungen ermöglichen.

WAS IST FÜR SIE DABEI?



Passivhaus ist NZEB!

Ganz gleich ob Sie Planer, Handwerker oder Behördenmitarbeiter sind, oder ganz einfach Ihr eigenes Haus als Passivhaus errichten möchten: Hier gibt es Ausbildung und Beratung ganz nach Ihrem Bedarf. Mit unseren aktuellen Trainingsangeboten und -Materialien, entwickelt von weltweit führenden Spezialisten des nachhaltigen Bauens, werden Sie eine Vielzahl neuer Dinge über das Bauen lernen. Und in unseren Trainingszentren mit Anschauungsobjekten und Kontakten in die Bauwirtschaft werden Sie Dinge sehen und begreifen können, die Sie vermutlich noch nie gesehen haben. Mit diesem Hintergrundwissen sind richtige Entscheidungen und erfolgreiche Projekte zum Greifen nahe! Und falls Sie in der Folge weitere Beratung benötigen werden wir auch dann für Sie da sein.

Warum nicht gleich mal hineinschnuppern? Unsere Webseite bietet viele Informationen und wird zu einer Wissensplattform ausgebaut.

www.train-to-nzeb.com

WAS SIND IHRE ZIELE?

Die Hauptaufgaben des Projektes sind die Planung, Errichtung und Ausstattung von vier betriebsbereiten Ausbildungszentren (in Bulgarien, Rumänien, der Türkei und Tschechien) sowie eines Pilotzentrums (in der Ukraine).

Wissen schafft's!

Die Anpassung bestehender und die Erstellung neuer Kurricula für die Ausbildung von Bauschaffenden, die Ausbildung von 90 Ausbildern und Training für 2400 Handwerker, 480 Planer und 720 Nicht-Fachleute (Behördenmitarbeiter, Entscheider, Vertreter von NGO's und Verbrauchersorganisationen, Journalisten etc.) sind weitere wichtige Bausteine.



Train-to-NZEB
The Building Knowledge Hubs

All diese Aktivitäten werden, in Verbindung mit weiterführenden Beratungsangeboten nach dem „One-stop shop“ Prinzip, das Bewusstsein und die Kapazität für die Errichtung von Passivhäusern/NZEB mit erneuerbaren Energien vergrößern und gleichzeitig die Nachfrage nach solchen Lösungen in Neubau und Sanierung verstärken.

www.train-to-nzeb.com

training

UNSER NETZWERK

Wissenstransfer

Train-to-NZEB möchte Wissen und Erfahrungen von führenden Forschungs- und Weiterbildungsinstitutionen aus Deutschland (Passivhaus Institut) und Irland (Passive House Academy und Limerick Institute of Technology) in zunächst fünf europäische Länder übertragen – Bulgarien, Rumänien, die Tschechische Republik, die Türkei und Ukraine.

Das Konsortium wird von dem bulgarischen Center for Energy Efficiency enEffect koordiniert und umfasst auch die Bulgarische Bauwirtschaftskammer und BSYS, das rumänische Nationale Institut für Forschung und Entwicklung im Bauen, Städtebau und nachhaltige Entwicklung (INCERC), ebenfalls aus Rumänien die Business Development Group und die Pre-University Education Foundation – Future, daneben die tschechischen Partner von SEVEN, die Fakultät für Bauingenieurwesen der Universität Ege in der Türkei und das Kommunale Entwicklungsinstitut aus der Ukraine.

Zudem konnte das Projektteam bereits neue Netzwerkpartner gewinnen, mit dem Ziel, den Erfahrungsaustausch weiter zu intensivieren. Kontaktieren Sie uns heute noch, wenn Sie Ihre Institution in den Verbund einbringen möchten!

CONTACT INFORMATION



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partner:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649810.

www.train-to-nzeb.com



So geht NZEB!

Wollen Sie's wissen?



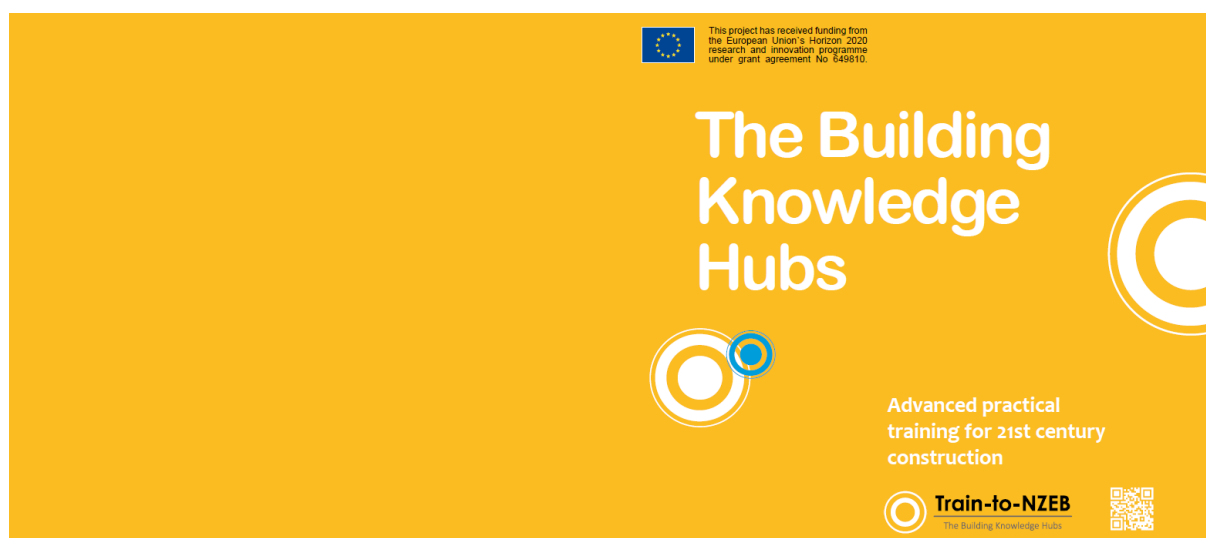
Train-to-NZEB
The Building Knowledge Hubs

FINAL PROJECT BROCHURE

A comprehensive final project brochure of 134 pages was prepared and printed in 2000 copies in May 2018. It has been disseminated at major international events such as the International Passive House Conference 2018, the C4E Forum, the ECOMONDO conference, the 1st Bulgarian nZEB conference, the Greek and Italian Passive House conferences and many others.

A [downloadable electronic version](#) is available through the project website.

The full brochure is available in Annex to this deliverable.



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www.train-to-nzeb.com

building projects rely to a large extent on EU cohesion policy funding). A really complex situation, where a uniform approach might really make a difference.



Figure 3: A Certificate of Attendance is handed to a course participant.
© EnEffect

Here, the Passive House concept and approach comes in handy. As an evidence-led, scientifically robust, international low energy design methodology, it ticks all the boxes. Passive buildings are nearly zero-energy buildings and, over time, make a significant contribution to reducing the EU's dependence on imported fossil fuels and to the achievement of its climate change targets. At the level of individual projects, the air tight thermally sealed insulation envelope ensures high levels of energy efficiency and secures low fuel consumption for both heating and cooling purposes. And it's worth it: a passive building is a more economic one to live and work in. But that's not all: due to the mechanical ventilation systems with heat recovery, the passive buildings provide the perfect health and sanitary living environment. Actually, in our cities, in terms of exposition to harmful emissions, they are one of the safest places to stay in.

And their worth has been proven in practice over the past quarter century. Those construction professionals from design through to delivery who advocate this standard are not simply expressing personal opinions but can point to the system's proven worth over time through careful scientific observation and abundant supporting evidence. Good experience with Passive House buildings was one reason for the European Commission to state the Nearly Zero Energy Building (nZEB) as the goal in

the second decade of the 21st century. Heating demand in new passive buildings can be reduced by more than 80% compared to the existing average, and there will be no problem with the additional energy demand of new construction - buildings with such an efficiency can easily be supplied with renewable energy. And this also applies for deep energy retrofits: following the passive house concept, the results can be really stunning and reduce the heating demand by a factor of 10 – and even more. We just have to follow a simple principle: “if you do it, do it right”.

With these assumptions, the idea for establishing of a network of well-equipped training centres (Building Knowledge Hubs, BKHs) to provide nZEB and passive house training in Central and Eastern Europe was developed and gained financial support by the Horizon 2020 of the EU in the project Train-to-NZEB (www.train-to-nzeb.com). Five new such centres - in Bulgaria, Romania, Czech Republic, Turkey and Ukraine - were established under the guidance of Passive House Institute and and MosArt/Passive House Academy (Ireland), as currently most of them deliver training courses under the internationally recognized certification schemes for Certified Passive House Designer/Consultant and Tradesperson. Additionally, a number of other training programmes are developed in close contact with the national authorities responsible for the vocational training sector, the professional chambers, the industry and other vocational training providers, which diversifies the training offer and channels new trainees to the Passive House training schemes.



Figure 4: Familiarising with new tools.
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Foreword



Figure 1: Dragomir Tzanov, Project Coordinator EnEffect.
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The building sector plays an important role for the execution not only of the 2020 climate and energy package but also for the years ahead, as it still represents about 40% of energy use in the EU with the largest cost effective savings potential. In the view of the debates on the energy and climate goals for 2030 and 2050 and in the light of the Energy Union initiative and the issues with the security of the energy supplies, the EU has adopted an ambitious vision for the energy performance of its buildings as well. This requires a major quality shift throughout the construction sector, which, as already well known, needs to be ready to deliver high energy performing renovations and, in particular, nearly zero energy buildings. This goal necessitates a major effort to increase the number of qualified professionals and building workers, which is directly related to the quality of the educational programs and the inclusion of training on intelligent solutions for energy efficiency and renewable energy in buildings. As long-term impacts, also corresponding to the latest market demands, these changes are expected to contribute to the overall execution of the 2030 and 2050 goals (exemplified by the “Clean Energy for All European” legislative package) in achieving of decarbonized building stock, integration of decentralized energy production based on renewable sources and, as an overarching goal, climate change mitigation: targets which achievement is virtually impossible without the support of innovative tools and instrument for upskilling of the labour force.

Of course, a number of barriers exist, especially in markets driven by low-cost investment decision as in many Eastern European countries. Some of these barriers include the lack of understanding of the nZEB specifics by the professional community, low motivation of the workforce and low educational level of the blue-collar worker, lack of experience and practice with nearly-zero energy renovations, low level of penetration of RES technologies, and many others. There is a pressing need for upgrading and facilitating the available large-scale qualification and training schemes and also to promote flexible continuing training schemes for architects, engineers, building managers, local authorities and other influencers, emphasizing on the application of ambitious and proven international standards and approaches for execution of quality nZEB projects. The goal to involve all relevant stakeholders and professional target groups requires the establishment of a well-designed networking structure supported by enhanced web-based communication tools. Attracting the end users and the investors in creating a positive market environment relies on the deployment of a targeted information and communication campaign. These activities should be supported by networks of one-stop shop training, information and consultation centres, providing not only integrated building design services and demonstration, but also administrative and financial advice (extremely important in situations, in which



Figure 2: Practice makes perfect.
© EnEffect

The BKHs are equipped with all necessary tools and materials to demonstrate in practice the leading principles of the passive and nZEB concept and approach based on the “energy efficiency first” principle, with all of them having full pressurization testing and infrared imaging equipment, operational mechanical ventilation with heat recovery systems, practice training walls for application of airtightness materials and products, and full-size demonstration models showing the approach to the nZEB concept in different construction types specific for the participating countries. Through the integration of practical training exercises in the generally theoretical training schemes, a large number of industrial partners were attracted to support the development of the training centres and now use the facilities for training not only of construction workers but of sales and marketing personnel, which is another positive feature of the undertaking. Additionally, the training programmes have proven to be a matter of interest (as according to expectations) for building managers and supervisors, who are best positioned to transfer the knowledge at the building sites, especially in countries with depleted human capital and largely underqualified working force in the construction sector.

Figure 5: Airtightness testing lecture.
© EnEffect



Last but not least, being positioned as nZEB knowledge centres, the BKHs have attracted a number of enquiries for direct consultations on actual passive house construction projects and have conducted series of training courses and demonstration sessions for local authorities. Supported by the strong international movement towards energy efficiency and climate change adaptation planning at city level and the national programmes

supporting energy efficiency building renovation, the BKHs have proven to be a logical influencer of decision for managing and strategic planning of development of the building stock – hopefully, for the years to come.

Dragomir Tzanov
EnEffect
Project Coordinator Train-to-NZEB

Figure 6: Training for all target groups.
© EnEffect



PROJECT NEWSLETTER

As planned, 6 editions of the Train-to-NZEB newsletter were published, dedicated to major project outcomes and events. They are disseminated to a network of more than 2000 targeted stakeholders and published on the project website.

Additionally the PHI distributed regular information on the project to the membership (>3600 persons throughout the world) of the International Passive House Association iPHA via contributions of their newsletter and Tweets.



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 1
March 2016

[in](#) [f](#) [t](#)

TRAIN-TO-NZEB: The New Building Knowledge Hubs of Europe



The Train-to-NZEB project aims to provide world-class training on energy efficiency and RES in buildings, based on new training programmes, business plans and up-to-date training equipment for a set of training and consultation centers across Europe.

Its goal is to improve the knowledge and skills in the construction sector and to provide practical trainings, demonstrations and comprehensive consulting services for design and construction of Nearly Zero-Energy Buildings (NZEB) supported by RES, based on the Passive House concept.

The training centers (or Building Knowledge Hubs) will form an international network, providing trainings on the curricula developed under the European BUILD UP Skills initiative and by project partners, as well as continuous opportunities for exchange, updating and improving of the existing training programmes. The modern training facilities will enable the conduction of practical exercises in addition to the theoretical programmes already available in the focus countries. Find more at www.train-to-nzeb.com

Contents:

TRAIN-TO-NZEB: The New Building Knowledge Hubs of Europe

Our network: continuous exchange and knowledge sharing for innovative training approaches and solutions

How to train your dragon? No... How to set up your new BKH? We've got some of the answers!

Train-the-trainer course in Dublin: An experience worth sharing

Highlights from the ground

News from us and our partners

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



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 2
July 2016

[in](#) [f](#) [t](#)

TRAIN-TO-NZEB: A Highlight at the International Passive House Conference



World-class training on energy efficiency and RES in buildings, improving the knowledge and skills in the construction sector through practical exercises, demonstrations and consulting services for Nearly Zero-Energy Buildings (nZEB), based on the Passive House concept.

There was no better place to promote this quite straightforward mission of the Train-to-nZEB project than the International Passive House Conference itself. A special demo model was designed and constructed by Passive House Institute and displayed in the exhibition hall, just across the stand of the Darmstadt-based research institute. More than 1000 participants at the conference - among them a strong group of nearly 200 Chinese specialists - had the chance to test their knowledge and skills and apply by their own hands the most appropriate materials to provide airtight connections at the trickiest places. And yes, we got this on TV - if German is your language, check out the video link! Find out more at www.train-to-nzeb.com

Contents:

TRAIN-TO-NZEB: A Highlight at the International Passive House Conference

A Memorandum with ABF shows the way for TRAIN-TO-NZEB in the Czech Republic

Ege University completes the development of the T2NZEB centre in Turkey

A paragon of a training programme: TRAIN-TO-NZEB Romania is ready for the challenges ahead

Local and international business partners back up the Ukrainian BKH

Highlights from the ground

News from us and our partners

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



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 3
July 2017

[in](#) [f](#) [t](#)

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 (BKHs) 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.

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

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



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 4
November 2017

[in](#) [f](#) [t](#)

The Building Knowledge Hubs of Europe: Local Actions with a Global Vision



With the advancement of the negotiations on the new versions of the Energy Performance of Buildings and the Energy Efficiency Directives, the Train-to-NZEB project (www.train-to-nzeb.com) is delivering a strong message: the European energy transition will happen only if we put significant effort in qualification of building professionals along the whole construction sector value chain. In the past months, the project team has enriched the political discussions at European, national and local level with valuable experience coming from intensive direct interactions with investors, industry representatives and training and education suppliers. The message is clear: we need to raise the quality and responsibility within the sector, to bring the understanding of the leading NZEB principle to the building sites, and to set the delivery of modern, comfortable and healthy energy efficient buildings that comply with the standards of the future decades as our primary goal.

The BKH network is set precisely around this target: the training centers in Bulgaria, Romania, Turkey, the Czech Republic, and Ukraine offer a wide variety of training courses in a holistic framework which is a guarantee that the users of our training concept will not only raise their knowledge and skills but will also change their mindset and understanding of the integrative concepts that will allow NZEB to move from the realm of desirables and become a reality. With experience building on, we already have a lot to demonstrate, but probably the most valuable feature to offer is partnerships - partnerships between researchers, investors, designers, construction managers and contractors, as well as central and local authorities' representatives and the local civil actors. Our partnership network is growing and with its support, we are confident of being able to make energy efficiency policies work. And mind you, this is not always an easy task, but if you are in - come and join us at www.facebook.com/train2nzeb and www.twitter.com/train2nzeb!

Contents:

Bulgaria: Train-to-NZEB brings together stakeholders from the industry and the educational sector

Romania: The Certified PH Tradesperson course is becoming a bestseller - and more

The Czech Republic: Joining forces with the academia, vocational high schools and professional chambers

Turkey: BKH-Izmir in Ege University becomes a center for NZEB-related info and training

Ukraine: The Ukrainian BKH gathers representatives of the local industry with a look to building renovation

EU: Train-to-NZEB at the EPBD Concerted actions forum in Bucharest, Romania

On the web: New e-learning tool for decision makers

Training and networking for 21st century construction

Highlights from the ground

News from us and our partners

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



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 5
April 2017

[in](#) [f](#) [t](#)

Train-to-NZEB at the Central & Eastern European Energy Efficiency Forum (C4E) in Sierock, Poland



As C4E (www.c4e-forum.net) organizers say, this is not your average conference. We know it from experience - this forum really makes a difference. It is the perfect place to stage our beloved project, as it is built around the same concept - establishing active networks and activating new ideas, much as our BKH network. Which, hopefully, also makes a difference. C4E builds and strengthens the Central and Eastern Europe's energy efficiency community, and with so many interesting efficiency projects, policies and programmes happening in the region, our community needs a dedicated platform for sharing and learning together.

The event promises to offer a great mix of participants from governments, the public sector, NGOs, civic societies and businesses - just the right audiences to spread the word about Train-to-NZEB and our network of training centers operating at full speed in Bulgaria, Romania, Turkey, the Czech Republic, and Ukraine. We will hold our final project conference at a dedicated pre-conference workshop starting at 10:00 on 13th June and finishing just before the official opening of the conference, hoping to steal the show... Joking or not, we stand our chances: definitely, this will not be your regular workshop. We will work with airtight tape and membrane, we will do bowties, measure your body temperature and check how you breathe. Curious? Come and join us, there will be a lot of surprises!

Later on, we will have a conference session on what we know best - how

Contents:

Train-to-NZEB at the C4E Forum, 13-15 June 2017, Sierock, Poland

Training and networking for 21st century construction

The new Train-to-NZEB brochure

Bulgaria: NZEB conference in the official agenda of the European Council's Presidency

Romania: The Romanian BKH, a market leader on sustainable building concepts and promotion of nZEB

The Czech Republic: The IngreES international conference and cooperation between H2020 projects

Turkey: The positive feedback to training courses in BKH-Izmir in Ege University opens the way to Istanbul and Ankara

Ukraine: On the back of successful projects

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



Train-to-NZEB

The Building Knowledge Hubs

A Horizon 2020 project in support of improved qualifications in the building sector

E-newsletter, Issue 6
January 2019

[in](#) [f](#) [t](#)

More than 4000 construction specialists trained under the Train-to-NZEB project



Back in 2015, the Train-to-NZEB project started with a goal that seemed too ambitious and unrealistic to many people - to ensure mass roll-out of the programmes developed under the BUILD UP Skills initiative by training at least 2400 people within the value chain of the construction experts - designers, workers and decision-makers included. Well, we proved disbelievers wrong - the target is reached, and some of the achievements of the project exceeded even our expectations. In a word: 7 active training centers established in the 5 involved countries, 2400 construction workers, 480 designers and 720 non-specialists passing successfully through our courses, a new project started with 4 new training centers joining the network, hundreds of (award-winning) events organized, and thousands of friends won over. No doubt - a tough road it was and we've definitely had our ups and downs along the way, but now we dare to dream... and we want more!

But what we cherish most is the quality of our training courses - a quality that is reflected by awards won back to the Building Knowledge Hubs.

Contents:

More than 4000 construction specialists trained under the Train-to-NZEB project

E-learning for non-specialists: the perfect tool to open up the market

A new Building Knowledge Hub opens doors in Enniscorthy, Ireland

Bulgaria: More than 900 construction specialists in Train-to-NZEB courses

Romania: They know how to build NZEBs

The Czech Republic: 750 participants were trained on NZEB courses in Prague

Turkey: The rising demand

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

PRESS RELEASES

As planned, more than 6 international press releases were published, and more than 20 national press releases are disseminated and published in local languages. Some of the international press releases can be assessed at the following links:

<http://www.buildup.eu/en/explore/links/train-nzeb-building-knowledge-hubs-europe-0>

<http://www.buildup.eu/en/events/train-nzeb-way-nearly-zero-energy-buildings-0>

<http://www.buildup.eu/en/events/train-nzeb-official-opening-bulgarian-bkh-0>

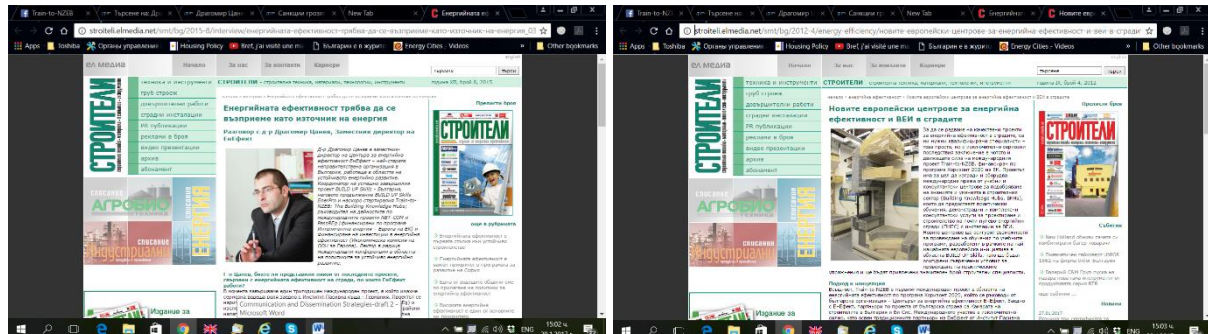
<http://www.buildup.eu/en/events/train-nzeb-train-trainer-course-0>

<http://www.buildup.eu/en/news/5th-building-knowledge-hub-opens-doors-bulgaria-0>

<http://www.buildup.eu/en/news/way-nearly-zero-energy-buildings-train-nzeb-project-0>

<http://www.buildup.eu/en/events/training-courses-energy-efficiency-and-res-buildings-carried-out-more-900-construction>

EXEMPLARY PUBLICATIONS:



POWERPOINT PRESENTATION

A comprehensive Powerpoint presentation was developed in early 2017 and updated at the end of the project. It illustrates the aims and methods of the project as well as the tangible results that were achieved and has found much use on various occasions. Moreover, it was presented as an automated slide show during conferences.

11.1.2019 r.



 **Train-to-NZEB**
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