



# **Inclusive Vocational Education and Training for Low Energy Construction (VET4LEC)**

*Detailed work programme for the project*

(Ref : VP/2016/001/0121)

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## 1. Background

Buildings are responsible for 40% of energy consumption and 36% of CO<sub>2</sub> emissions in the European Union (EU) and have been identified by the Intergovernmental Panel on Climate Change (IPCC) as the most economical sector for CO<sub>2</sub> savings. The European Commission (EC) assesses that by improving the energy efficiency of buildings total energy consumption in the EU could be reduced by 5% to 6% and lower CO<sub>2</sub> emissions by about 5%.

Studies and reports, such as the recent *Buildup Skills* reports (2014), call for a considerable improvement in the overall quality of training courses in many countries through integration of EE [energy efficiency] and RES [renewable energy sources] competences into the curriculum. *Buildup Skills* also identified the potential failure of initial and continuing VET in providing the necessary 'skills and incentive' to meet the requirements for pan-European 'nearly-zero energy buildings' NZEB (EPBD, 2010), renewable energy targets (RES, 2009) and the Energy Efficiency Directive (EED, 2012). Added to this, establishing equivalence between construction VET systems and qualifications across the EU, especially through implementation of the European Qualifications Framework (EQF) is imperative if 20/20/20 targets to reduce energy use, increase renewable energy, and reduce carbon dioxide (CO<sub>2</sub>) emissions by 20% by 2020 are to be met.

## 2. Problems in meeting EU energy requirements

In order to conform to EU low energy policies and the Roadmap to low carbon construction and retrofit, it is important to address a number of issues:

- *the need for occupational coordination*: the *Buildup Skills* overview report (2014) of the National Reports identifies a 'shortage of cross-trade knowledge and skills' (in, for instance, installation of RES systems), including insufficient coordination between occupations and their 'borderline' skills and unsatisfactory interdisciplinary training opportunities within upper secondary and continuing education and training systems'. Energy efficiency works require close coordination between the different occupations on site, placing demands on these occupations going beyond their immediate scope of responsibilities to understand the building fabric as a unified system.
- *the need for energy/thermal literacy to address the performance gap*: low carbon technologies have proven to be sensitive to poor design, installation, commissioning and operation and, along with envelope construction, require enhanced technical knowledge and soft skills associated with communication, team working and self-management.
- *variable construction VET programmes*: Member States exhibit different VET models of governance, from employer-driven through to social partnerships and tripartite partnerships of employers, unions and educationalists under the overall direction of government. Each system differs in its inputs and therefore impacts in different ways on the quality of site practice, access to lifelong learning, and EQF implementation.
- *the (un)attractiveness of the construction sector, including for women and young people*: Despite a number of initiatives to make the construction sector more attractive there are still difficulties to attract and retain women and, in several countries, young people in general. Combined with an ageing workforce there is, therefore, a clear need to address such recruitment problems in the industry, amongst others through a more open and permeable labour market and construction process. The transfer and development of skills and knowledge and the deployment of transversal abilities would be facilitated by a broader recruitment basis

and enhanced educational component, particularly as women are better represented in technical areas of construction than in the trade or operative areas. At the same time, the image of the industry can be improved by showing the ways in which it can be regarded as an eco-sector.

### **3. Objectives of the project**

The project intends to detail what this implies and how some of the above mentioned problems can be addressed through alliances between key stakeholders. Its aim is to identify the ways in which:

- a) coordination between occupations involved in low energy construction on site can be improved so as to reduce the performance gap between design intent and implementation and meet energy efficiency targets;
- b) the opportunities for low energy construction (LEC) and interdisciplinary VET can be extended so as to enhance the attractiveness of the sector and advance energy literacy, in particular for women and youth, in line with the EQF;
- c) trainers can become more aware of LEC requirements and the difficulties of implementation at site level.

The specific objectives are to:

1. Collect, assess and compare national case studies, amongst others developed in the framework of the *Buildup Skills* initiative;
2. Identify the coordination and knowledge, skills and competence and areas of critical importance to fabric energy efficiency and high services efficiency on site in different countries;
3. Evaluate the association between particular VET models and site performance;
4. Map knowledge, skills and competence for low energy construction in the different national VET models, in order to further the implementation of EQF and other European tools.
5. Assess how interdisciplinarity is addressed in different EU VET models and what the potential is to incorporate an energy literacy component;
6. Develop guidelines and recommendations as to how the weaknesses identified can be addressed;
7. Develop guidelines and recommendations as to how to enhance the inclusivity of the sector for women and youth;
8. Develop guidelines/tools for trainers;
9. Provide criteria for curricula development and outline the components of a core energy literacy curriculum compatible with the European policy tools;
10. Contribute to the development of alliances between key stakeholders - including social partners, companies, local/regional authorities and VET institutions.

The proposal is in line with the Work Programme of the European Social Partners 2016-2019 including addressing youth employment, enhancing the attractiveness of the construction sector (mainly to underrepresented categories such as young people and women), anticipating skills needs and facilitating mutual recognition of qualifications.

#### **4. Methodology**

Duration : 24 months.

FIEC will be the applicant organisation and the EFBWW the co-applicant.

Organisations of 10 different countries, with a representative geographical balance as well as with different VET models, will be directly involved in the project. 8 of them are already known (BE, BG, ES, FIN, HU, IT, PL, SI) and are included in the application as "affiliated entities". 2 will have to be selected via a call for tender (our French and German members informed us that there are organisations at their national level, not yet identified, who will certainly be interested in taking part in the project).

Each national partner will collect cases of best practice examples of low energy construction projects, as well as on the national VET systems(s) with a particular focus on "green" skills/competences, and elaborate a national report, which will be presented and discussed during the first seminar.

The research part will be subcontracted to an external coordinating expert following an open call for tenders. His/her task will specifically consist in compiling the national input received into an EU overview/summary, analysing and assessing such input, elaborating guidelines/recommendations and the final report. He/she will also advise the partners on issues related to VET and "energy efficiency". If needed he/she will make face to face visits in some of the countries concerned (maximum 5 out of 10), in order to clarify/complete/investigate further some aspects of the input provided.

The project involves observation, diagnosis and development of a strategic perspective for successful LEC and the construction of instruments for furthering the development of LEC capacity.

It will be centred on a series of case studies in the EU taken amongst others from national initiatives within the *Buildup Skills* framework. In particular, the focus will be on comparing particular low energy construction projects in each of the partner countries, selected as representing different labour market and VET models.

For each project the construction method, the division of labour and qualifications/competences of those employed, the use of sub-contractors, the occupational interfaces and their resolution, links with/role of local VET colleges/providers and the social partners will be investigated.

Following this, curricula requirements for energy literacy will be developed incorporating technical and transversal skills to build the foundations for lifelong learning. They will be presented as guidelines and recommendations, in particular for trainers, in order to be disseminated and promoted in the various Member States.

#### **5. Activities**

In order to achieve the above mentioned objectives the following activities will be developed :

- a) identify appropriate initiatives and examples of national best practice low energy construction projects and collect the corresponding information;
- b) study, compare and assess the projects identified;

- c) identifying in the national VET system(s) coordination and knowledge, skills and competences of critical importance to increase energy efficiency and lower the “performance gap” between LEC objectives and on-site performance;
- d) preparation of national reports on the findings;
- e) organisation of a first seminar to present and discuss the cases/input collected and assess energy performance in different VET models with all the partners and some external stakeholders;
- f) develop preliminary guidelines and recommendations so as to draw up criteria/recommendations/guidelines for curricula requirements for LEC and to enhance the inclusivity and attractiveness of the sector for women and youth;
- g) organisation of a second seminar to present and discuss the preliminary guidelines and recommendations;
- h) Final conference to present and disseminate the final outcome.

## **6. Timetable**

The project will be undertaken according to the following foreseen timetable (all the meetings/seminars/conference will take place in Brussels) :

- Months 1-2 :
  - launching of the call for proposal for the "coordinating expert" and for the 2 additional national partners not yet identified (in principle in France and in Germany)
- Month 2 :
  - Kick-off meeting with all the partners, in order to define the methodology, the tasks to be undertaken and the time schedule
- Months 2-5 :
  - collection of data/information by the national partners (examples of best practice projects in terms of energy efficiency/low energy construction and information on national VET system(s) with a focus on “green” aspects)
- Month 5 :
  - first Steering Group meeting for a first analysis/assessment of the input collected so far by the national partners
  - preparation of the first seminar
- Months 6-8 :
  - national partners will complete/finalise the collection of national input and incorporate this into draft national reports, which will be used as a basis for the discussions of the first seminar
  - finalising the organisation of the first seminar
- Months 8 :
  - first seminar aiming at presenting, discussing and assessing the national cases and draft reports and the input collected and identifying any further input required, including in order to align with the EQF; a limited number of external concerned stakeholders will also be invited to attend and to participate in the discussions

- Months 9-11 :
  - on the basis of the discussions and feedback provided during the first seminar the "coordinating expert" will compile the input collected and obtain additional information identified as necessary into a summary overview and elaborate preliminary guidelines/recommendations;
  - we have foreseen the possibility, if needed, for the "coordinating expert" and the project coordinator to organise face to face meetings and visit projects in a maximum of 5 countries (out of 10) covered by the project; the aim of these meetings would be to clarify/investigate further aspects of national reports in alignment with the methodology formulated and agreed on;
- Month 11 :
  - second meeting of the Steering Group aiming at assessing the preliminary work undertaken by the "coordinating expert" and to start the preparation of the second seminar
- Months 11-15 :
  - finalisation of the draft report by the "coordinating expert", which will include EU guidelines/recommendations, and of the preparation of the second seminar
- Month 15 :
  - second seminar aiming at presenting and discussing the draft final report elaborated by the "coordinating expert"; a limited number of external concerned stakeholders will also be invited to attend and to participate in the discussions
- Months 16-18 :
  - on the basis of the discussions and feedback provided during the second seminar the "coordinating expert" will finalise/amend the final report
- Month 18 :
  - third Steering Group meeting aiming at finalising the final report and preparing the final conference
- Months 19-21 :
  - preparation of final conference
- Month 21 :
  - Final conference, during which the project and its outcome/deliverables will be presented; various external stakeholders (EU Institutions, other EU sectoral organisations, representatives of training centres,...) will be invited to attend
- Months 22-24 :
  - this period will be used for amending the final report, if needed, and to prepare its dissemination (translations, printing, etc.).