

Appendix 2. List of proposals for training courses and schemes with potential for inclusion in the national vocational training and education system

The project "Roadmap for Trainings to Develop Skills and Knowledge on Intelligent Energy Solutions in Buildings for Bulgaria until 2020" (BUILD UP Skills Bulgaria), is conducted by a consortium consisting of EnEffect (coordinator), National Agency for Vocational Education and Training and Bulgarian Construction Chamber.

List of proposals for training courses and schemes with potential for inclusion in the national vocational training and education system

1. Contemporary tendencies in the energy efficiency in buildings. The energy characteristics of the buildings: the Bulgarian experience and the best practices from Europe
2. Design and construction of photoelectric power plants, small water power plants, wind power plants
3. Decentralized systems for co-generation on biomass: implications for the industry. Best practices of application of co-generation modules
4. Energy efficiency and RES installations in the technological process of the industrial systems. Energy transformation with low emissions of harmful gases
5. Zero emissions of greenhouse gases from residential buildings. Solar systems for domestic hot water and their implementation in the heating systems of residential buildings.
6. Application of biomass heating. Best practice examples from Bulgaria and Europe
7. Construction of hybrid systems. Electrical energy audits, design of photoelectric systems and design of wind systems.
8. Economical evaluation of the projects for decentralized production of electrical energy.
9. Procedures for execution of energy audits of buildings. Selection of subcontractors and quality assurance.

10. Energy efficient retrofitting of buildings.
11. Installation of fittings and systems during assembly of installation for biomass systems, thermal pumps, surface geo-thermal and solar photoelectric transformers, and solar thermal installations according to end-users' requirements
12. Ecological aspects of the fitting of installation biomass systems, thermal pumps, surface geo-thermal and solar photoelectric transformers, and solar thermal installations
13. Existing European standards for biomass systems, thermal pumps, surface geo-thermal and solar photoelectric transformers, and solar thermal installations
14. Application and enforcement of the codes and standards during installation of biomass systems, thermal pumps, surface geo-thermal and solar photoelectric transformers, and solar thermal installations
15. New technologies for the installation of biomass systems, thermal pumps, surface geo-thermal and solar photoelectric transformers, and solar thermal installations
16. Application of the "road access" method in specific construction activities
17. Passive house craftsmen course

Possible approaches for inclusion of the training courses in order to improve the acquiring of new skills for implementation of intelligent energy efficiency measures

- Upgrading the List of professions for VET of specific professions and inclusion of new professions related to the implementation of measures for energy efficiency improvement and the use of renewable energy in buildings; as an example, in 2009, the new professions "Technician in energy equipment and systems – RES" (5220308 – 3rd Level of professional qualification) and "Installer of energy equipment and systems – RES" (5220408 - 2nd Level of professional qualification) were added.

- Incorporation of new knowledge, skills and competences, related to the energy efficiency measures, in the State Educational Requirements by professions.
- Changes in the training plans and programmes through inclusion of new subjects or new contents in the existing subjects, updating of the contents of a part of the specific professions;
- Adding of new themes in the educational process, which are not clearly mentioned in the training programmes, in the framework of the process of planning of the training in the respective subject in the annual distribution of classes or the respective course in the vocational training centres.