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GSS-VET

Geothermal and solar skills - Vocational education and training

Dear readers,

Ladies and Gentlemen,

Through this publication we would like to focus your attention on “Geothermal and solar skills – Vocational education and training (GSS-VET)”, an Erasmus+ funded project, carried out by 16 professional partners from 4 different EU countries: Bulgaria, Germany, Greece and Spain. GSS-VET aims to tackle the existing gaps in continuous training of geothermal and solar systems installers, plumbers and electricians, by creating and implementing a demand-driven VET training.

The European Commission has adopted a new “Skills Agenda for Europe”. The agenda aims to ensure that people develop all necessary skills for today’s and tomorrow’s labor market. Today’s Agenda calls on Member States and stakeholders to improve the quality of skills and its relevance with the labor market, as 40% of European employers report their difficulty in finding proper skilled employees so as to grow and innovate. Furthermore, only a few people have the entrepreneurial mindset and competences to start their own business and keep adapting to the market’s evolving requirements. In this Agenda, the Commission proposes 10 actions to be taken forward, 3 of which fall within the scope of the GSS-VET:

- Making Vocational Education and Training (VET) a first choice by enhancing opportunities for VET learners to undertake a work based learning experience and promoting greater visibility of good labor market outcomes of VET;
- A review of the European Qualifications Framework for a better understanding of qualifications and to make better use of all available skills in the European labor market;
- A review of the Recommendation on Key Competences to help more people acquire the core set of skills necessary to work and live in the 21st century with a special focus on promoting entrepreneurial and innovation- oriented mind-sets etc.



GSS-VET project
Kick-off meeting
Heraklion, Greece, December 2016

The GSS-VET objectives are to:

- Design 2 EU core curricula (European Qualification levels 4-5) for geothermal and for solar energy system installers, divided in sets of learning outcomes i.e. two corresponding VET programs;
- Implement, deliver and evaluate the above-described training;
- Certify, after developing a technical scheme according to ECVET recommendations and ISO 17024 norm, participants developed skills.

As a training outcome, an E-learning Platform is to be designed and launched, containing all training materials, in English, Bulgarian, German, Greek and Spanish.

The project plans to:

- Directly involve 40 trainers and 200 workers during the project's lifetime;
- Involve 2,500 adults in the created training curricula and the innovative methodology, as well as to prepare 1,000 trainers in targeted trainings thanks to the involvement of VET providers, sectorial organizations (including an EU umbrella), regional authorities and other associated partners;
- Create a roadmap for the official recognition of the training by 2025;
- Develop a network of VET providers implementing the GSS - VET training in 8 EU countries.

The project aspires to:

- Enhance creativity and innovation including entrepreneurship at all level of VET;
- Promote work-based learning including traineeships, apprenticeships and dual learning models to help transition from learning to work;

- Make lifelong learning and mobility a reality.

The project has already published:

- List of core green skills required for plumbers and electricians in the 4 partner countries;
- Mapping of existing training programmes in geothermal & solar installations in the partners countries;
- Selection of best practices of teaching methods to be implemented in the project;

Visit <http://www.gss-vet.eu/> for further information on GSS- VET.



What happened in the last 6 months?

In Greece and Spain

Greece and Spain, countries that have already participated in the past GSSkills project, had to review and update the catalogue of competences already developed thanks to the experience of the sector organizations involved.

To this end, the Greek organizations involved in the task (HELAPCO and ETAN) and the Spanish organization INSTAGI have each organized a workshop with local companies in order to review the competences catalogue of the previous GSSkills project.

The results of the previous GSSkills project were presented to these companies to allow them to update the skills required by the installers in these industries.

During the meeting, the competences detected in the previous GSSkills project were analyzed in a round-table format in which the participants expressed their own opinion about the results of the previous project and the competences detected.

After an initial analysis of the competences and knowledge defined in the previous project, it was concluded that they are still necessary, and new required skills were suggested under the criteria of the participants in the meeting. The necessary skills were organized according to the logical process that is followed in each project.

The classification criteria, agreed by the participants, for both competences in solar and geothermal energy were:

- Competences for the installation **design**
- Competences for the **execution** of the installation
- Competences on **maintenance** of the facility

Each of the organizations that have participated in this task have processed the data collected in each workshop, and INSTAGI has compiled the information from the three workshops in a report that will



Workshop with companies in the premises of INSTAGI, San Sebastian, Spain.



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Newsletter No 2

Dear readers,

The EU's development policy promotes the transformation towards an inclusive green economy that generates growth, creates jobs and helps reduce poverty through sustainable management of natural capital.

As the transformation towards a green economy will change the characteristics of jobs in some sectors, the existing workforce needs to be re-skilled to foster the creation of the necessary green jobs. It is equally important to support local private sector development by providing eco-entrepreneurship skills to teach people how to start their own green business and thus increase opportunities to improve their standard of living. Practical examples will help convince all stakeholders that sustainable use of natural capital and ecosystems offers viable business solutions.



It is generally assumed that addressing training and education requirements to meet the future skills needs of green employers is fundamental to the successful growth of or transition to a green economy.

The Success factors addressing training requirements to meet future skills needs are as follows:

- Establishing what the long-run objectives, potential and outcomes are of addressing environmental challenges before deciding on approaches or policies
- Establishing a national strategy for green jobs training
- Having flexibility at the local or regional government level to provide training which reflects green skills needs. *
- Establishing dedicated national training centres for green skills

- Setting up national observatories for green jobs to identify skills needs and anticipate future skills needs by undertaking studies at sector and/or company level
- Having successful, highly responsive training and educational institutions ready to take on new training and educational projects in the area of the green economy.

In support of the above, the project GSS-VET set up ambitious objectives to offer innovative training to technicians, installers and technically educated people for solar and geothermal systems' installations.

In this second edition of the Newsletter, we will inform you with the latest project achievements:

Following the desktop researches on existing VET programs, the study of innovative teaching methods and the investigation of the necessary VET skills and competences in the four partner countries, the international team of GSS-VET started the practical work for preparing the training:

The first step was to develop detailed curricula for the three types of installations: solar-thermal, photovoltaic and geothermal systems and determine the requirements for the skills and the competences of the trainees to be acquired, as follows:

- For the solar thermal systems: 3 main requirements for the skills and 13- for the competences;
- For the PV systems: 9 basic requirements for the skills and 48 – for the competences.
- For the geothermal systems: 3 basic requirements for the skill and 18 – for the competences.

The second one comprised a definition of the required background of the trainers (experts in the field with relevant experience) and the trainees (to be older than 16 with relevant secondary education and /or professional experience).

The next step included the selection of training methods and approaches for the three types of systems, as well as the structure of the courses:

The training courses for the systems will be composed of theoretical and practical parts. The theoretical knowledge will be delivered in class and on-line, the practical exercises will be performed in class, in laboratories and/or in real workplace. The online part will be for acquiring all the necessary knowledge, and the practical one - for the acquisition of the competences and skills that an installer should have.

An e-learning platform will be developed for the theoretical knowledge where all the didactic materials, exercises or activities will be available to all students everywhere and at anytime.

For the acquisition of knowledge and competences the Project Based Learning (PBL) methodology will be used.

The duration of both training parts will be determined as follows:

- For the solar thermal systems – 50 hours theoretical lectures – in class and on-line and 60 hours- practical exercises;
- For the PV systems – 60/60 h;
- For the geothermal – 50/60 h.

The training will be carried out via an e-Platform, developed by the project for the purpose of the vocational educational training of renewable energy sources installers.

Based on the analysis of curricula, detailed diagrams were designed showing the structure of the training courses for the installers of the three renewable energy systems.

In order to have an idea about the organization of the trainings a diagram for the solar thermal systems training courses is shown further on. Similar ones are created for the other two systems, PV and Geothermal. The concept is that each course is composed of different blocks, containing a couple of units and activities to serve as a basis for the further development of the detailed contents of the lectures and exercises.

The diagram clearly points the evaluation structure of the acquired skills and knowledge.

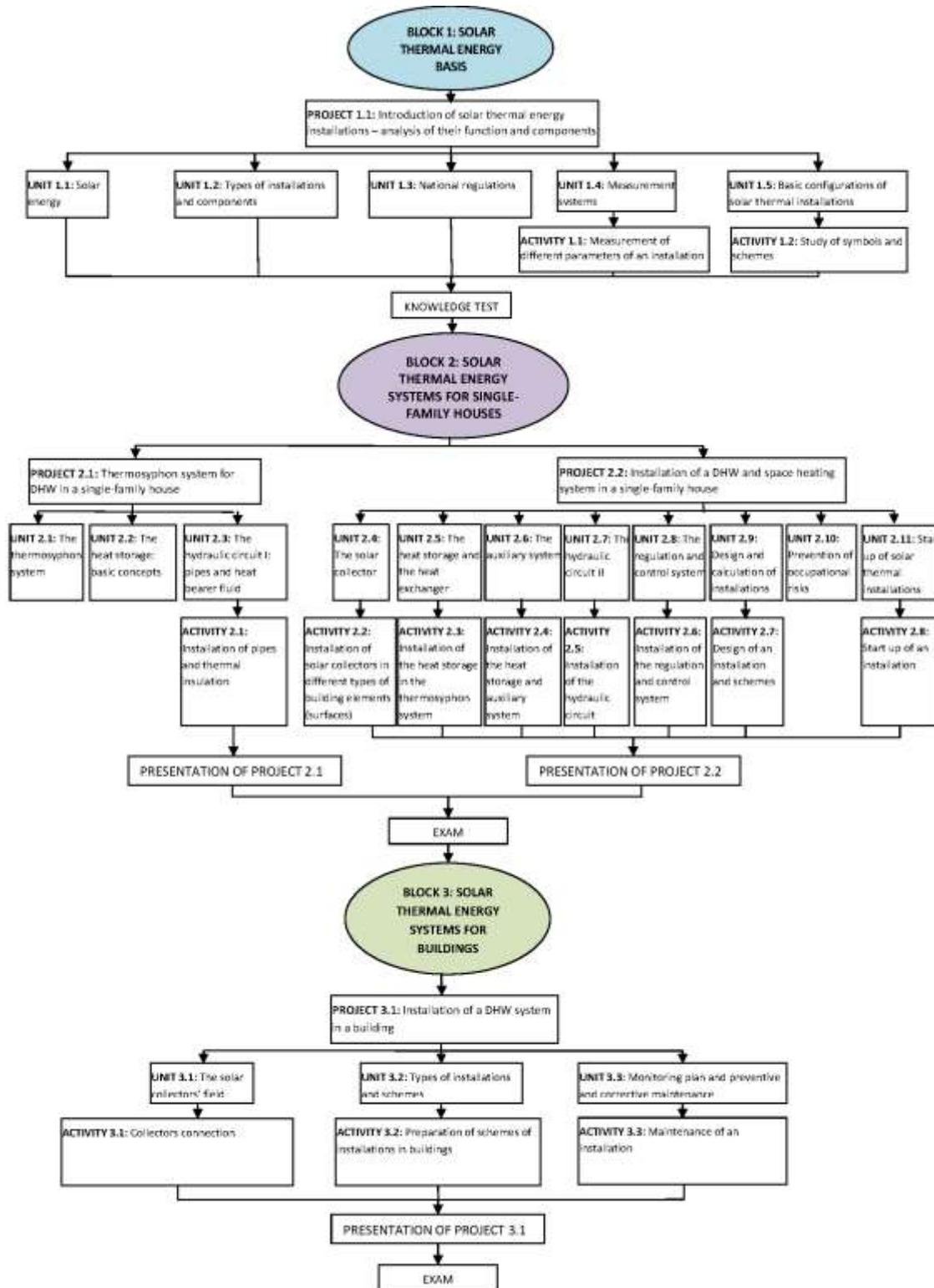


Figure 1: Block diagram illustrating the training courses for solar thermal systems

Together with the mentioned materials, guidelines for implementing the innovative teaching methods were developed. At this moment, the BG partners are in the process of verifying the teaching methods. For the purpose of verification, the ELI, TUS, CISB and SEC partners together organized a national workshop in the frames of the “*14 international Conference of EE and RES for South East Europe*” where specialists in the green filed systems gave their feedback.



The workshop was concluded with a lively discussion with the audience. As a result, the project partners have received a strong recommendation to translate the training materials and guidelines to national languages, and not just provide an English version. Please visit our website www.gss-vet.eu for further information, news updates and other interesting facts derived from our project.