GSS-VET

Geothermal and solar skills - Vocational education and training

VOCATIONAL EDUCATION AND TRAINING IN EUROPE

THE GSS-VET PROJECT

Funded by the Erasmus+ Programme of the European Union

Erasmus + Sector Skills Alliances
575891-EPP-1-2016- 1-EL-EPPKA2-SSA

About the Project

- All new buildings by 2020 will have to be nearly zero energy buildings (EU Directive 2010/31/EU, Energy Performance Buildings).
- Building practice shows, that most vocational education and training providers do not yet include green skills in their Curriculum.
- The project **GSS-VET** aims to tackle the existing skills gap in continuous training for plumbers and electricians concerning geothermal and solar skills by creating and implementing a demand-driven VET training.

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About the Project Aims

- Enhancing creativity and innovation incl. entrepreneurship at all level of VET.
- Promoting work-based learning incl. traineeships, apprenticeships and dual learning models to help transition from learning to work.
- Promoting partnership between public and private institutions.
- Reaching the objective of 15% of adults to participate in lifelong learning.
- Making lifelong learning and mobility a reality.

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About the Project Outputs

- 2 EU core curricula for Geothermal and Solar energy systems installers (EQF level 4-5);
- Innovative teaching method;
- Complete training material available online (for trainees and trainers);
- On-line evaluation method;
- Certification of the training;
- Roadmap for the official recognition of the training by 2025;
- Network of VET providers implementing the GSS - VET training in different EU countries.

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Project Preconsiderations

- Different Education, Qualifications and Classifications in Europe.
- Innovative Training Methods.
- Labour Market Situation.
- Training of Trainers.

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About the Project Consortium

Greece

1. TEI of Crete (Project Coordinator)
2. Chania Development Corporation
3. European Center in Training for Employment
4. Hellenic Association of Photovoltaic Companies
5. SQLearn
6. TÜV Austria Hellas

Bulgaria

1. Chamber of Installation Specialists
2. European Labour Institute
3. Sofia Energy Centre
4. Technical University of Sofia

Germany

1. German Geothermal Association
2. Hochschule Bochum
3. International Geothermal Association

Spain

1. ALECOP
2. Instagi

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About the IGA

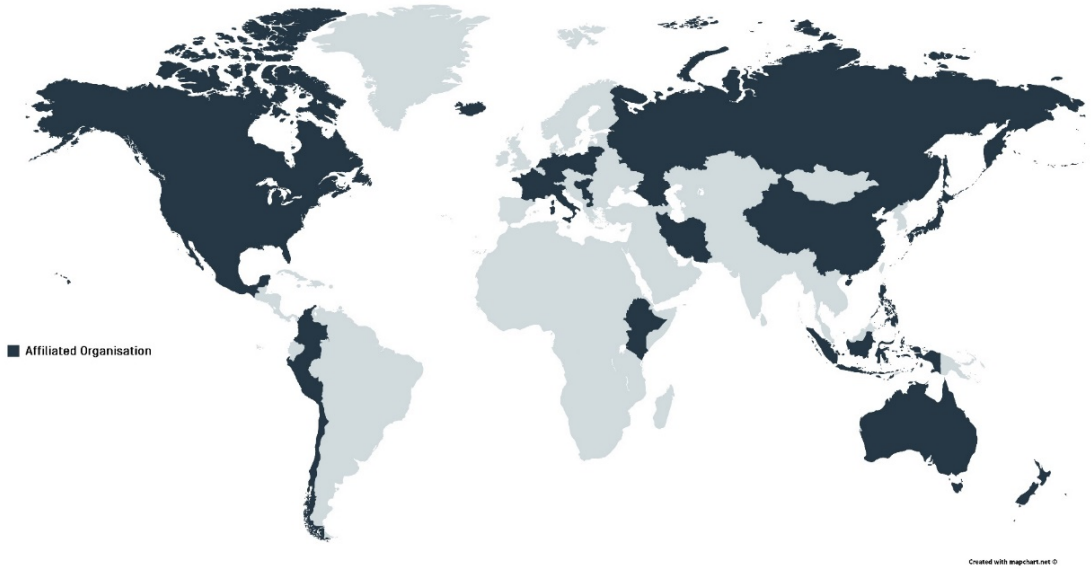
OUR MISSION

Encourage, facilitate and promote the development of geothermal resources, as well as innovative research in geothermal technologies.

OUR VISION

Future global energy needs can be based on a 100% renewable energy mix, and at the IGA we are committed to make geothermal energy a significant part of that.

OUR MEMBERS



30 Affiliated National Organizations

5,000 Members Worldwide

ranging from academy to industry representatives

OUR PARTNERS

RENALLIANCE renewables working together
IRENA International Renewable Energy Agency
REN21 Renewable Energy Policy Network for the 21st Century
THE WORLD BANK
GLOBAL GEOTHERMAL ALLIANCE
ECOSOC United Nations
ESMAP Energy Sector Management Assistance Program
100% RENEWABLES
IEA Geothermal
GREEN CLIMATE FUND

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Implementation

- Focus on technical skills, but also on transversal ones, including entrepreneurship, ICT, interdisciplinary skills and ability to work effectively with people from other disciplines.
- For the above an e-Learning Platform is to be designed with corresponding digitalized contents.

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Training Programme

- **GSS-VET** foresees to produce an e-learning synchronous and asynchronous system – the GSS-VET Platform.
- The Platform being created, all training materials will be digitalized and uploaded online, in English, as well as Bulgarian, German and Greek.

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Training Programme

Block 1. Introduction to Solar Thermal Energy

- Unit 1.1: The Sun (Solar Energy)
- Unit 1.2: National Requirements
- Unit 1.3: Types of installations and components
- Unit 1.4: Measurement Systems
- Unit 1.5: Basic Configurations of Solar Thermal Installations

Block 2. Solar Thermal Installations for DHW and Space Heating in Single-family Houses

- Unit 2.1: The thermosyphon system
- Unit 2.2: The heat storage - Basic concepts
- Unit 2.3: The hydraulic system: pipes and the heat bearer fluid
- Unit 2.4: The solar collector and different anchoring types
- Unit 2.5: The auxiliary system
- Unit 2.6: The hydraulic circuit
- Unit 2.7: The regulation and control system
- Unit 2.8: Design and calculation of installations
- Unit 2.9: Prevention of occupational risks and safety work on the construction site
- Unit 2.10: Start up of solar thermal installations

Block 3. Solar Thermal Energy Systems for Buildings: Residential Multifamily and Commercial Buildings

- Unit 3.1: The Solar Collector Fields
- Unit 3.2: Types of Installations and Schemes
- Unit 3.3: Monitoring Plan and Preventive and Corrective Maintenance

Game

- Set up a Solar Water Heating (SWH) system

Self-assessment

- Self-assessment Quiz_Unit 1.1
- Self-assessment Quiz_Unit 1.2
- Self-assessment Quiz_Unit 1.3
- Self-assessment Quiz_Unit 1.4
- Self-assessment Quiz_Unit 1.5
- Self-assessment Quiz_Unit 2.1
- Self-assessment Quiz_Unit 2.2
- Self-assessment Quiz_Unit 2.3 + 2.4
- Self-assessment Quiz_Unit 3.1
- Self-assessment Quiz_Unit 3.2
- Self-assessment Quiz_Unit 3.3

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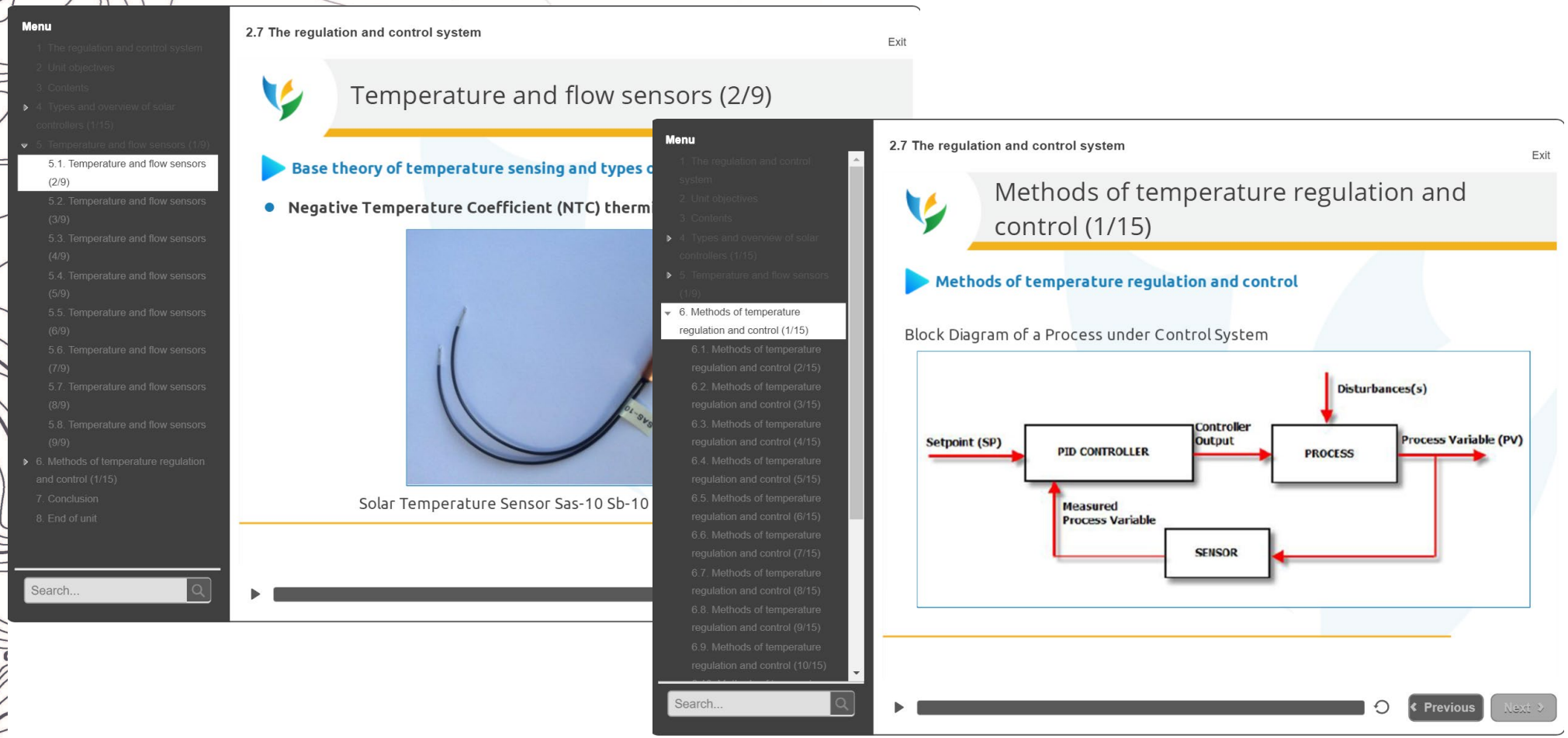
Training Units



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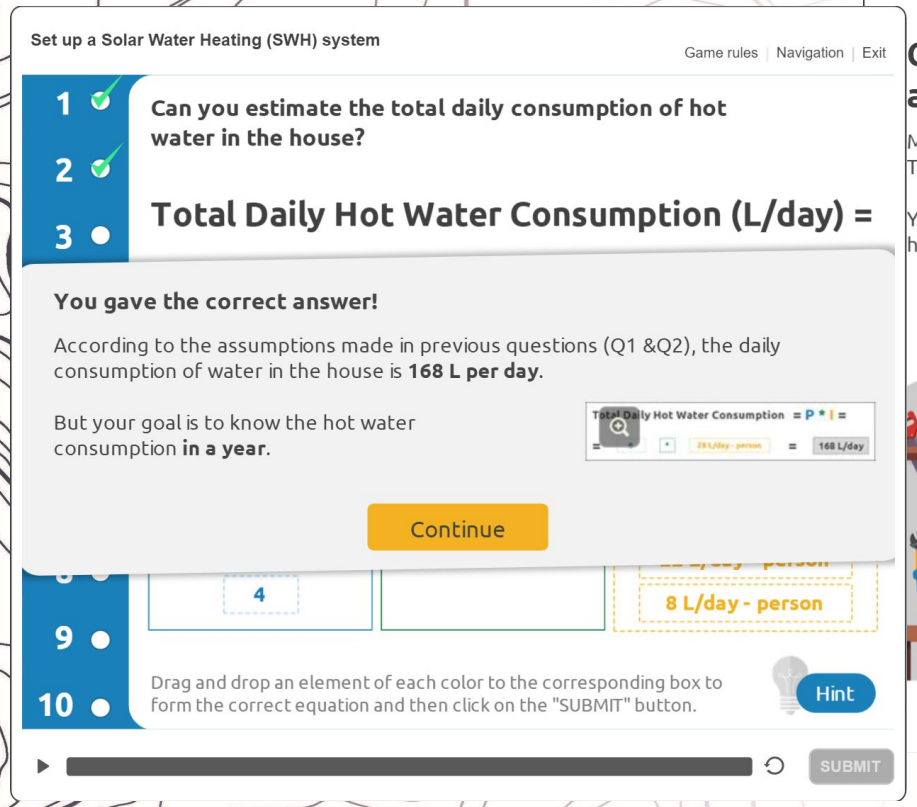
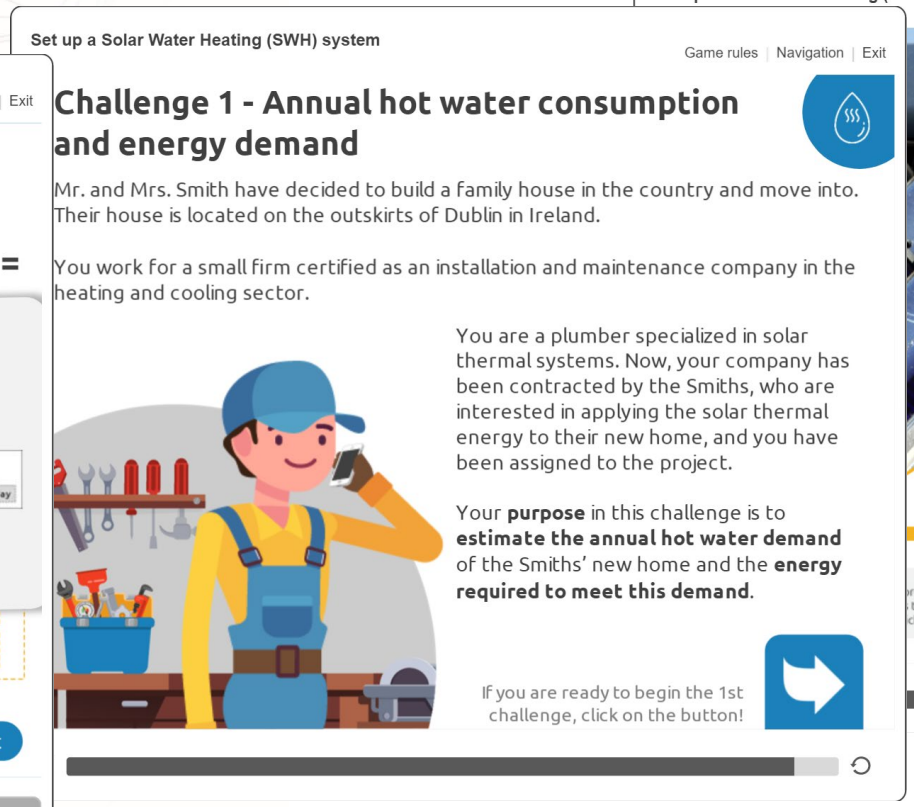
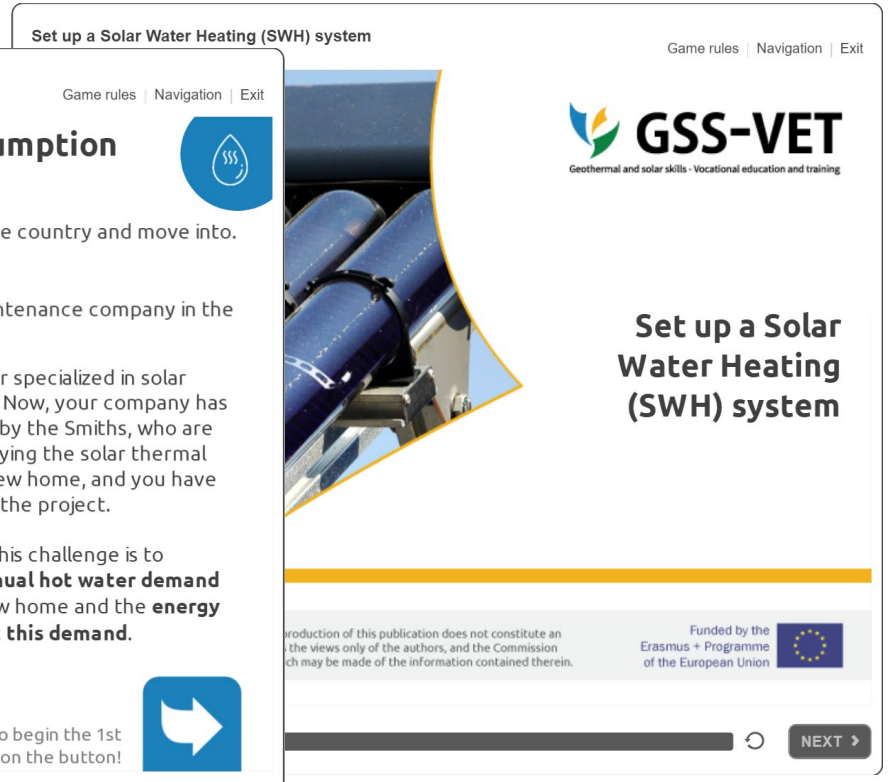
Self-assesment (Game)







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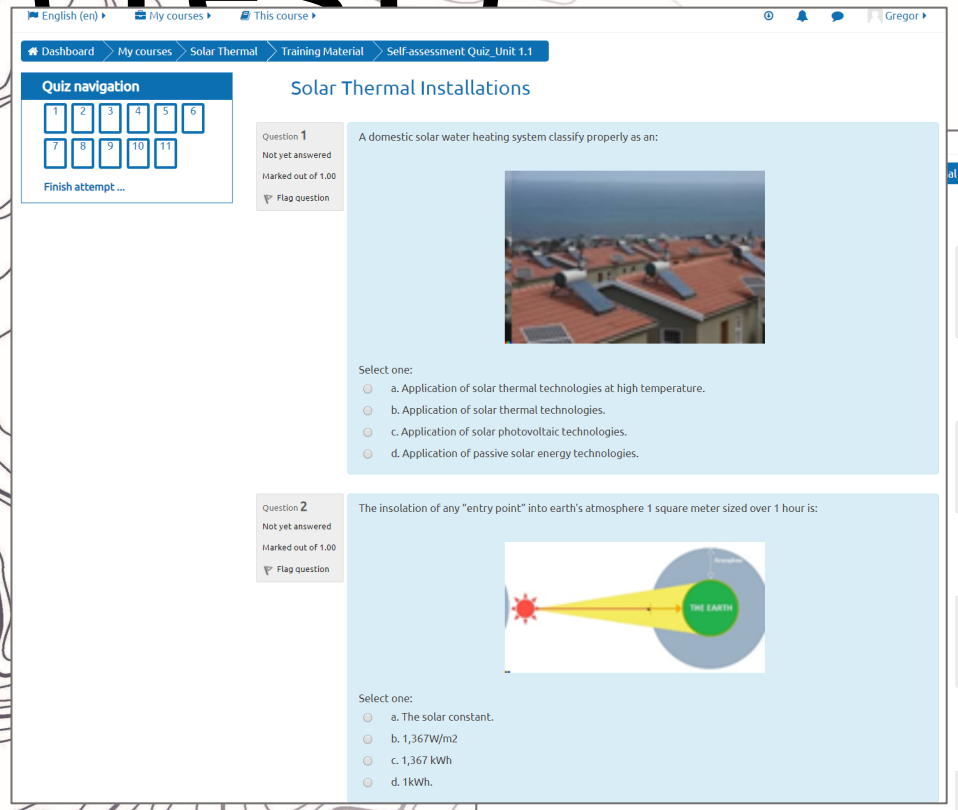
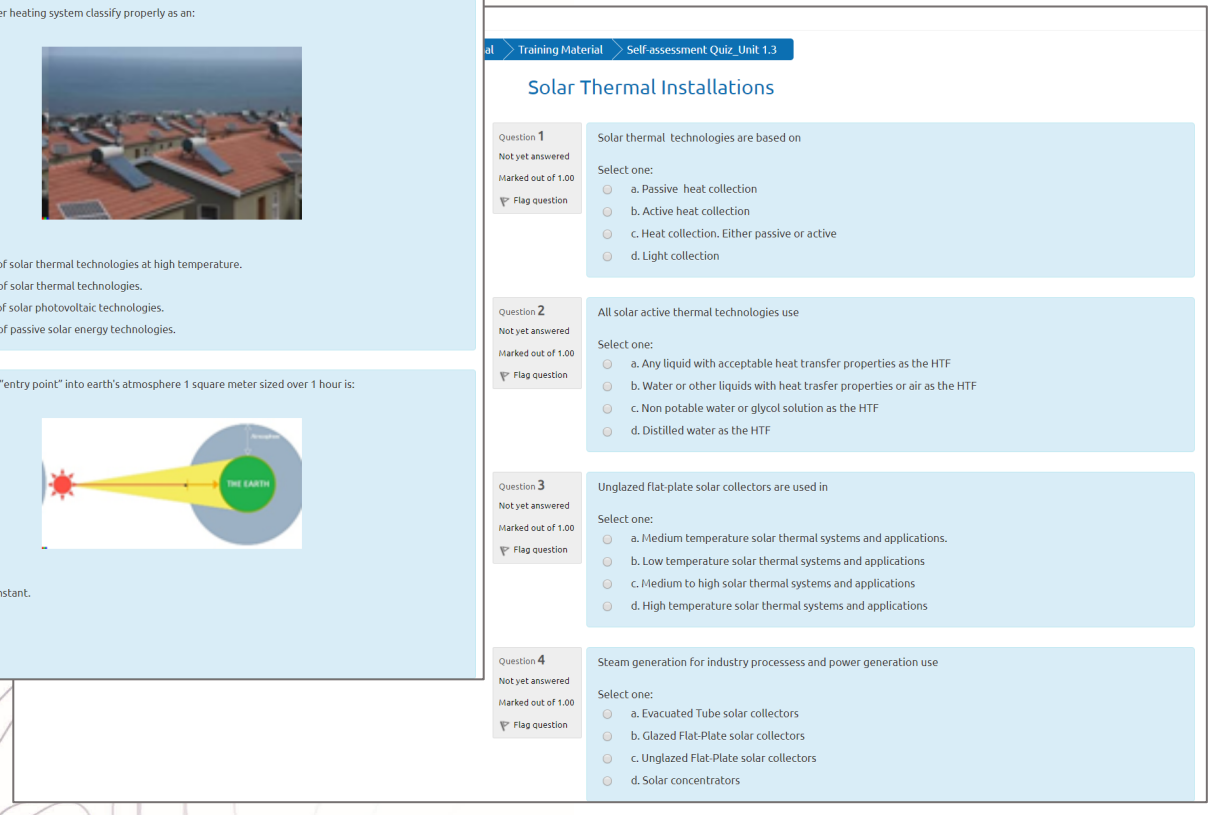
Self-assesment (Test)





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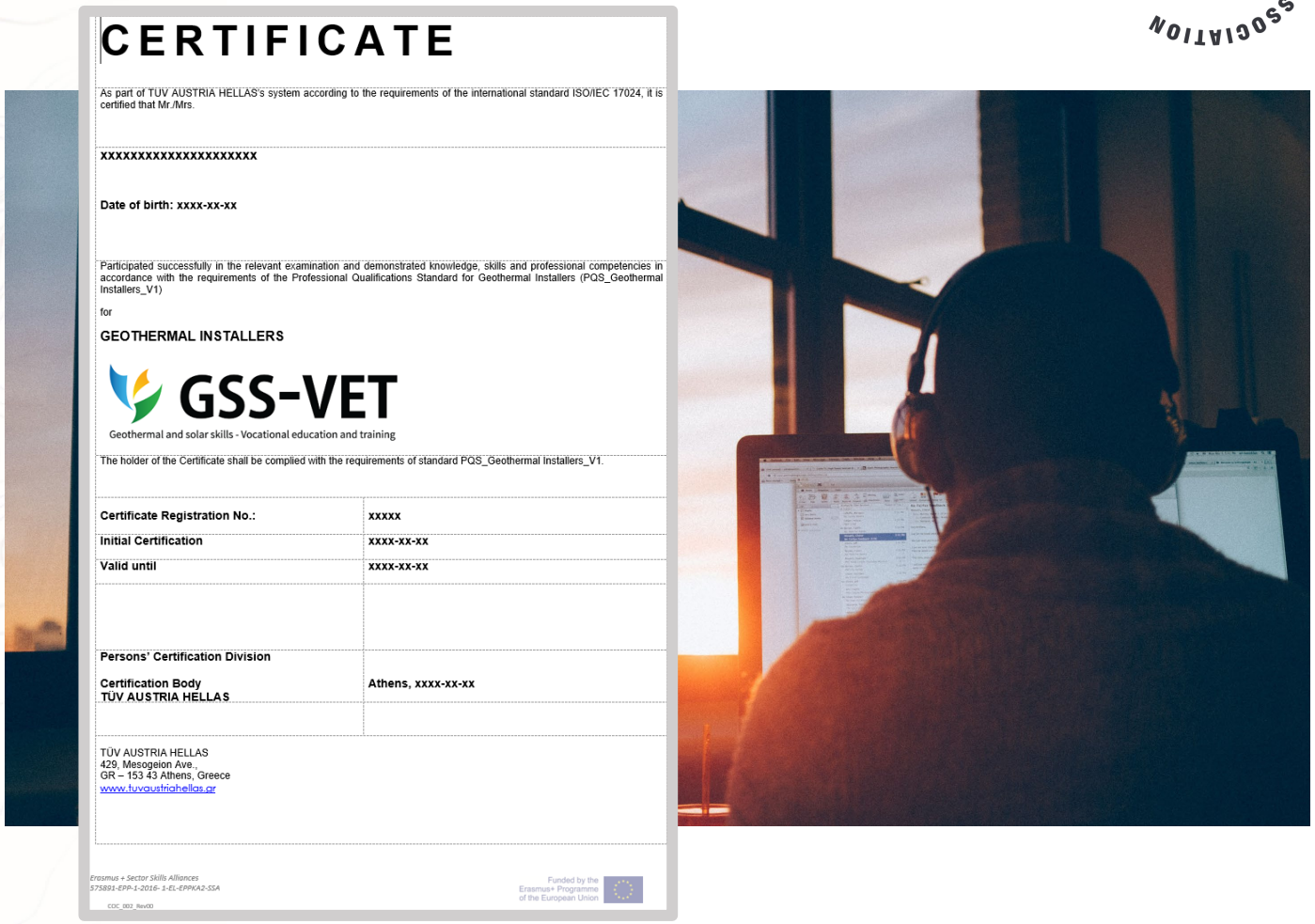
Certification

- The examination mechanism will conform to the requirements of ISO/IEC 17024 and will follow the ECVET recommendations.
- Once certified by a national VET provider, the skills of the trainee will be recognized by the whole network of VET providers.



CERTIFICATE

As part of TÜV AUSTRIA HELLAS's system according to the requirements of the international standard ISO/IEC 17024, it is certified that Mr./Mrs.

xxxxxxxxxxxxxxxxxxxx

Date of birth: xxxx-xx-xx

Participated successfully in the relevant examination and demonstrated knowledge, skills and professional competencies in accordance with the requirements of the Professional Qualifications Standard for Geothermal Installers (PQS_Geothermal Installers_V1)

for

GEOTHERMAL INSTALLERS

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The holder of the Certificate shall be complied with the requirements of standard PQS_Geothermal Installers_V1.

Certificate Registration No.:	**xxxxx**
Initial Certification	**xxxx-xx-xx**
Valid until	**xxxx-xx-xx**
Persons' Certification Division	
Certification Body **TÜV AUSTRIA HELLAS**	**Athens, xxxx-xx-xx**

TÜV AUSTRIA HELLAS
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GR – 153 43 Athens, Greece
www.tuvaustriahellas.gr

Erasmus + Sector Skills Alliances
575891-EPP-1-2016- 1-EL-EPPKA2-SSA
CDC_002_Rev00

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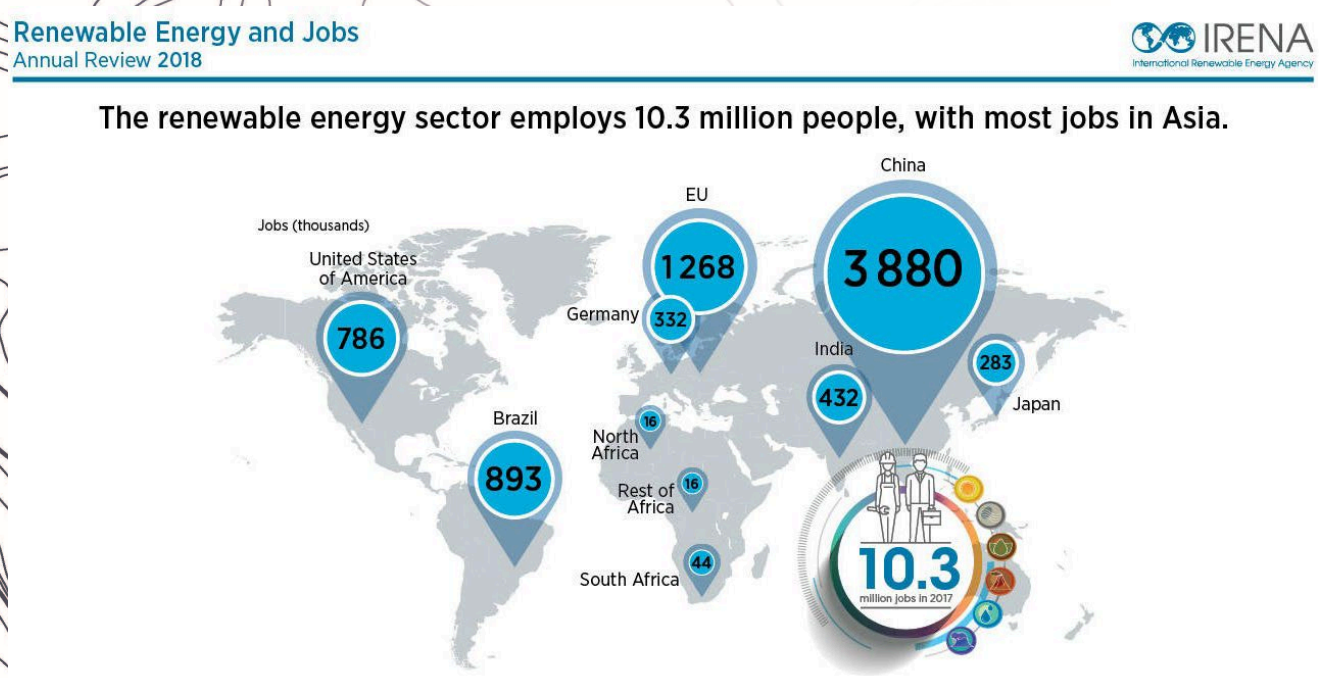
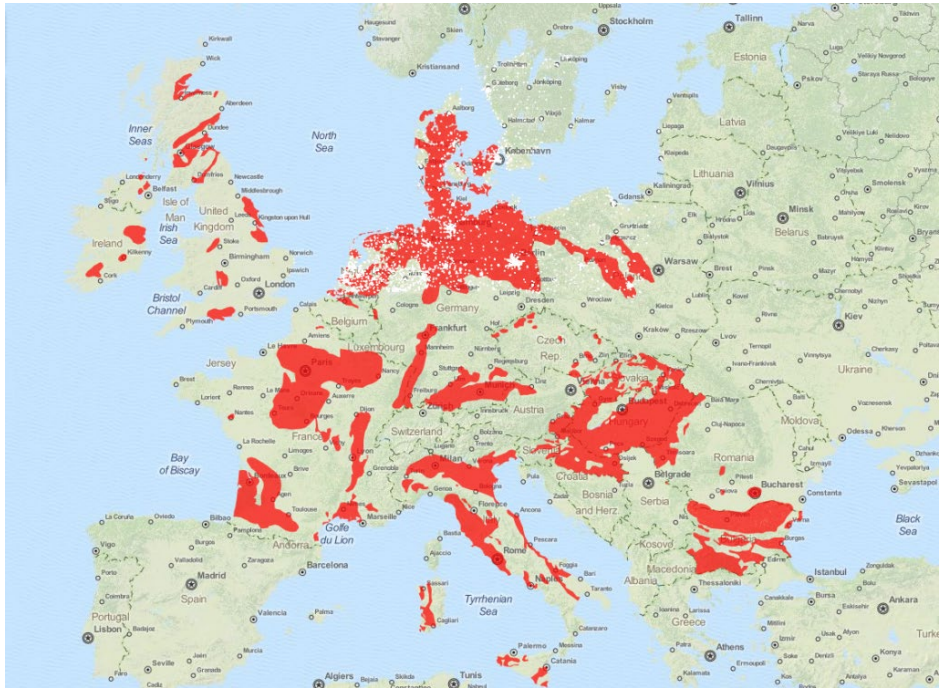
Experiences & Future Outlook





Thermal demand and geothermal district heating potential in Europe

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Thank you for your attention.