



European Construction Sector Observatory

Policy measure fact sheet

Cyprus

WE-Qualify

Thematic Objective 2

January 2017

Implementing body:	Cyprus Energy Agency
Key features & objectives:	Pilot skills training and accreditation programme to upskill the Cypriot construction sector on key aspects of energy efficiency in buildings.
Implementation date:	1/11/2013 – 31/10/2016
Targeted beneficiaries:	Specialised contractors and tradesmen in the construction and energy sectors.
Targeted sub-sectors:	Construction and energy efficiency
Budget (EUR):	268,132 ¹

In a nutshell

Challenges such as climate change and the environmental footprint generated by the construction industry are influencing the focus of policy-makers and businesses. Advances in technology are helping to drive the move towards a greener future by enabling sectors such as construction to meet environmental objectives. Technological advances are also importantly presenting new opportunities for businesses. Taking advantage of these opportunities requires a workforce with the right skillset.

In Cyprus, as in other European countries, the construction industry is experiencing a shortage of skills in the workforce. There is a lack of workers with knowledge and use skills of the latest construction technologies and materials. Green skills, particularly related to energy efficiency in existing and new buildings, are also lacking.

Construction companies tend to arrange in-house training for their employees². Whilst important, more training initiatives are needed to provide the sector with a sufficient number of qualified personnel to meet growing demand. According to the Build Up Skills initiative³, Cyprus needs to provide green skills training to between 2,000 and 4,500 workers and installers annually to meet the demands of the construction sector.

To help to address the challenge, the WE-Qualify initiative has been introduced as a pilot project to improve skills and

qualifications in the Cypriot construction sector and to provide the basis for continued skills development. WE-Qualify focuses specifically on the development of energy efficiency skillsets related to the installation and maintenance of thermal insulation, thermopanels, and biomass heating systems. WE-Qualify is part of the broad European Build Up Skills initiative⁴ to boost education, training and skills development on energy efficiency and renewable in all types of buildings.

The WE-Qualify initiative has been broadly successful. Key outputs include free access to online training resources, five pilot training courses and the production of 90 qualified installers that have successfully passed through the WE-Qualify training and examination process. As an additional planned outcome, the WE-Qualify skills training and accreditation programme and supporting resources are helping to strengthen national Standards of Vocational Qualifications (SQVs) in green skills areas. They are also serving as a component in the development of the National Qualification Framework in Cyprus⁵, and act as a compliment to other training activities, such as the Cypriot Vocational Education and Training (VET) system⁶.

General description

Insulation improvements are most needed in old residential buildings and public buildings, such as government buildings, schools, hospitals, etc. The WE-Qualify training programme is designed to reflect that need and to develop skills for those types of buildings in particular.

To upskill the Cypriot construction workforce, the three-year WE-Qualify pilot training initiative (2013-2016) aims to:

- Provide adaptable training materials and tools to support the upskilling of the workforce at national level;
- Inform the workforce about good practices and provide installation guidelines on energy efficiency in buildings;
- Create a group of skilled and qualified workers to meet the energy efficiency demands of the national market;
- Encourage greater numbers of workers to promote their

- professional skills;
- Raise awareness of the training and qualification system across sector-related groups, such as architects, engineers and land developers⁷.

Using a modular approach that combines theoretical learning with practical application demonstrations and exercises, WE-Qualify provides a training programme and a set of supporting resources to develop three critical skillsets⁸:

Skillset 1:	Placement of thermal insulation, covering conventional insulation / thermal insulation plaster, and external insulation.
Skillset 2:	Installation of thermopanes and exterior sunshades.
Skillset 3:	Installation and maintenance of Biomass heating systems.

Skillset 1: The thermal insulation installers training programme covers seven skills training modules. Two training courses, each covering the seven modules, are to be delivered for this skillset. Modules include an introduction to energy principles such as heat transfer, the legal requirements for thermal insulation in buildings, insight into insulating materials and their application on construction sites, as well as health and safety regulations and procedures⁹.

Skillset 2: The thermopanes¹⁰ and exterior sunshades installation training programme covers eight skills training modules. One training course covering the eight modules is to be delivered for this skillset. As well as covering heat transfer theory, legal requirements and health and safety, the modules also address thermopane properties and characteristics, the variety of panes and window panes, thermopane installation, the design of green buildings, and sun shading systems¹¹.

Skillset 3: The biomass heating system installation and maintenance training programme covers eleven skills training modules. One training course covering the eleven modules is to be delivered for this skillset. In addition to covering heat transfer theory and legal requirements, the modules also address biomass types and applications, markets, technologies, systems, equipment, functional requirements, installation and maintenance¹².

WE-Qualify is being delivered by six experienced stakeholders in the Cypriot construction sector: Cyprus Energy Agency (Leader); Cyprus Productivity Centre; Technical Chamber of Cyprus; Human Resource Development Authority; Organisation of Standardisation in Cyprus; and the Energy Service at the Ministry of Energy, Commerce, Industry and Tourism¹³.

The overall goal of the training courses is to train 125 blue collar workers/installers over the course of the initiative, with the expectation of producing 100 qualified installers. Training delivery takes place in a training centre that is certified by the Human Resource Development (HRD) Authority. Practical training is

delivered to small groups of 3-4 participants at a time to improve the learning experience. Examinations are held upon completion of each training module. Insulation & thermopane theory exams require at least a 70% score to pass and at least an 80% score for practical exams¹⁴. Biomass heating systems exams require at least a 70% score overall¹⁵. The names of all certificated installers are published on WE-Qualify website¹⁶ providing easy public access to lists of qualified and competent installers.

The key implementation goals include the provision of a website that houses a broad range of training resources that are free and easy to access, and the running of five pilot training courses. WE-Qualify training resources are made available on the WE-Qualify website. Resources include training and evaluation methodologies, guidelines, manuals, materials, tools, tutorials and reports.

Achieved or expected results

Two training courses were delivered for skillset 1 in 2015 and one in 2016. One training course was delivered for skillset 2 in 2015 and one was delivered for skillset 3 in 2016¹⁷. To advise and review the development and delivery of the training courses and materials, with a view to recommending improvements where necessary, the WE-Qualify partners established the National Steering Committee. The Committee is composed of three experts drawn from three Cypriot universities¹⁸, two experts from two government ministries¹⁹, and one expert from industry²⁰. Over the course of the initiative, the training programme was the subject of separate reviews involving the National Steering Committee, EASME, and consultations with businesses. Improvement work was guided by the recommendations put forward at each stage.

The first review (November 2014) recommended the introduction of a health and safety at work component, a checklist, a troubleshooting guide, and references to relevant standards, books, guides and technical materials, into the manuals for skillsets 1 and 2. The second review (September 2015) recommended that the modules on heat loss, thermal bridges and condensation in the manuals for skillsets 1 and 2 be developed in much more detail with the support of visual elements. The addition of modules and improvements based on feedback from trainers involved in the training programme preparation phase were also recommended, although there is no information available on specific recommendations. The third review (March 2016) recommended improvements to the training manual for skillset 3, such as the need to place greater emphasis on the section on connecting fire-water systems and on standards, regulations and legislation related to biomass, eco-design, energy labelling and air quality. The fourth review (May 2016) recommended a series of improvements to the technical aspects of the training manual for skillset 1, as well as editorial corrections and clarifications²¹.

Business consultations were used to evaluate the delivery and appropriateness of the training programme. The consultation took the form of a questionnaire which was developed to elicit

feedback from training course participants. The results of the consultation are examined later in this section. WE-Qualify partners are broadly satisfied with the level of applications received for training, the number of training course participants, and the number of participants that achieved accreditation, despite only achieving about 75% of their original targets.

Table 1 shows the hours of training provided and the total number of training programme applications, participants and qualifications achieved by skillset.

Table 1: Results of WE-Qualify pilot training programme

	Skill 1: Thermal insulation	Skill 2: Thermopanes & exterior shades	Skill 3: Biomass heating system
Theoretical training	24 hours	24 hours	31 hours
Practical training	9 hours	9 hours	9 hours ²²
Applications received	100	14	18
Number of participants	71	7	14
Number certified	69	7	n/a ²³

Source: Cyprus Energy Agency, 2016 ²⁴

A total of 132 applications were received, which is slightly above the targeted number of persons to be trained (125); however not all applications met the training course eligibility criteria or completed the training course. 92 participants successfully completed the training courses, which is a 74% success rate against the original target of 125. Qualifications were awarded to 76 participants that passed examinations on skillsets 1 and 2, equating to a success rate of 76% against the original target of 100. No examinations took place upon completion of the training course for Skillset 3, as Cyprus does not have an appropriate examination board for biomass heating.

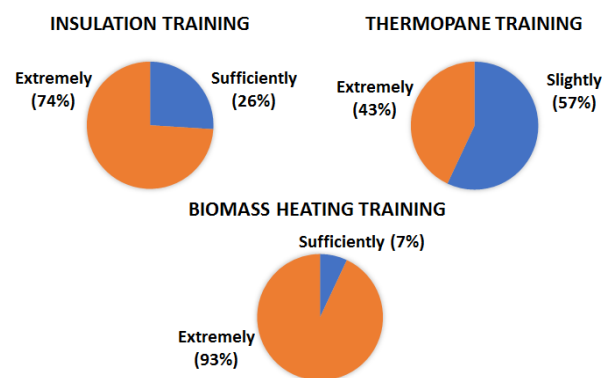
Over 90% of participants in courses for skillsets 1 and 2 passed their exams and received WE-Qualify certification. The pass rate is in line with expectations, according to the WE-Qualify coordinator²⁵.

Interest and participation in thermal insulation training was significantly higher than for training on the other two skillsets. This difference is also reflected in the number of qualifications achieved. An assessment of feedback questionnaire²⁶ completed by participants at the conclusion of the training courses provides some explanation. Feedback indicates that participants felt that they were more lacking in thermal insulation skills than in skills related to thermopanes and sunshades. Feedback also suggests that participants considered skills training on thermal insulation to carry greater business value.

The installation of thermopanes and exterior sunshades training course proved to be the least popular, with just 14 applications received. According to WE-Qualify Coordinator, this can be explained by the fact that installers at many construction companies had already taken part in training sessions and workshops organised by local and national institutions, such as the Ministry of Labour.

Feedback questionnaires were distributed to all course participants. 86 questionnaires were returned fully completed – 65 on skillset 1 training, 7 on skillset 2 training, and 14 on skillset 3 training. According to participants, training on skillsets 1 and 3 provided considerably more new knowledge and skills than training on skillset 2. Other training schemes on the installation of thermopanes and sunshades have already reduced the demand for skills training in this area.

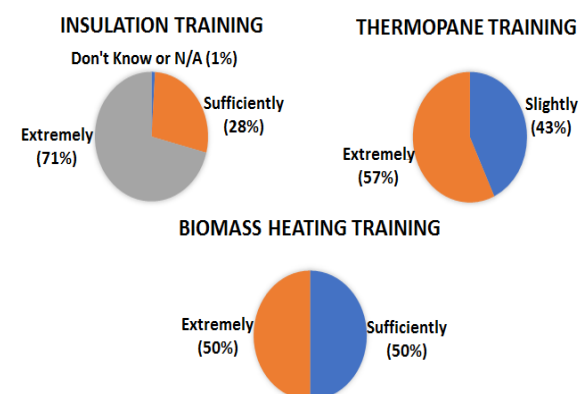
Figure 1: To what extent has WE-Qualify improved your knowledge and skills?



Source: Cyprus Energy Agency, 2016 ²⁷

Participants indicate that WE-Qualify training programmes for the three skillsets are valuable to their job performance. Skills on thermal insulation are most valuable, followed by thermopane and sunshades, and biomass heating systems. The 50-50% split on biomass skills suggests smaller market demand for these skills.

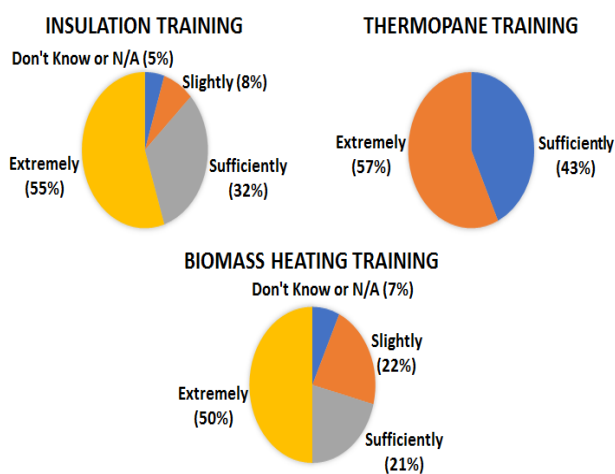
Figure 2: How valuable are WE-Qualify knowledge and skills to your job?



Source: Cyprus Energy Agency, 2016 ²⁸

When asked about the value of WE-Qualify certificates, the vast majority of participants agreed that they make them more competitive in the market, as they are an official recognition of competence and will assist them to win business. As there was no official exam and accreditation process for the biomass heating systems training, participants only received certificates to show completion of the course. Nonetheless, evidence of training is considered to offer an advantage in the marketplace.

Figure 3: To what extent does a WE-Qualify certificate improve your competitiveness?



Source: Cyprus Energy Agency, 2016 ²⁹

The initiative ended on 31st October 2016. Overall, it is considered to have been a success both by the organisers and by participants, despite not fully reaching its targets for participation and certification. Looking forward, the partners are considering how to extend the initiative and they are trying to establish an examination board to oversee a certification process for biomass heating systems training.

WE-Qualify is contributing to the implementation of the European Construction 2020 Action Plan³⁰. It is helping to improve the human-capital basis of the construction sector (Objective 2) by providing a tailored set of resources and a training and accreditation programme to plug the energy efficiency skills gap that exists in the Cypriot construction sector.

Perspectives and lessons learned

From the **perspective of the training participants (installers)**, the initiative was evaluated positively, in terms of how the training was provided, the new knowledge they had acquired and the value that certification provides. In terms of improvements looking forward, the participants highlighted that these types of courses might be more effective and beneficial if participants with similar levels of skills and experience could learn together. This approach would ensure an optimal learning speed and experience in each training group. Another lesson pointed to by participants is that greater emphasis should be given to

practical hands-on training. With a 75%-25% split between theory and practice, WE-Qualify has already given greater focus to practical training than other training schemes; however, participants would like more hands-on training.

From an **industry perspective**, construction companies welcomed the WE-Qualify training programme as a valuable national approach and scheme to support the upskilling of their installers, and as a compliment to existing local and/or in-house training schemes that companies tend to employ. According to the owner of Halloumas Construction Consultants Ltd³¹, the course has helped him to improve not only his knowledge and skills, but also the relevance and value of energy efficiency to his business, and the new opportunities it offers. After completing a training course, the company launched a new consulting service on energy efficiency in old and new buildings. The service is now helping apartment/home owners to prepare legal documentation to prove energy efficiency and is assisting them to reduce their energy consumption. Certification is also attracting greater numbers of enquires for renovation of old buildings. The owner of Halloumas also says that his company has benefited from networking and sharing best practices with other participating companies.

From the **project organisers' perspective**, the initiative is considered to have been successful. According to the Director and Project Coordinator at Cyprus Energy Agency, WE-Qualify attracted a relatively high level of interest from national construction companies³². WE-Qualify is the first national initiative in Cyprus to provide energy efficiency skills training to skilled construction workers and the aim is for such training to be expanded and built upon. WE-Qualify has certified 90 skilled workers as qualified installers. In addition to extending the training programmes and their reach, the aim is that growing numbers of qualified installers will lead to a reduction in number of failures and better quality of buildings.

Endnotes

- ¹ Budget includes EUR 201,197 of EC co-financing through the Intelligent Energy Europe Programme.
- ² Reference to interview held with Halloumas Construction Consultants Ltd on 1st December 2016.
- ³ BUILD UP Skills Cyprus:
<https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-cy>
- ⁴ BUILD UP Skills, Intelligent Energy Europe programme, EC:
<http://www.buildupskills.eu>
- ⁵ Ministry of Education and Culture (2014), Referencing of the Cyprus NQF to the EQF.
http://www.erasmusplus.cy/uploadfiles/ecvet/presentations/24_11_14/Kyriakou.pdf
- ⁶ Build Up Skills (2012), BUILD UP Skills – Cyprus. Analysis of the National Status Quo.
https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/build_up_skills_cy_national_status_quo_report_en.pdf
- ⁷ WE-Qualify Objectives, Cyprus Energy Agency:
http://www.cea.org.cy/we_qualify/%cf%83%cf%84%cf%8c%cf%87%ce%bf%ce%b9
- ⁸ Components of the Training Methodology, WE-Qualify, Cyprus Energy Agency:
Μεθοδολογία κατάρτισης εγκαταστατών θερμομόνωσης και εγκαταστατών κουφωμάτων (Αγγλικά) at
http://www.cea.org.cy/we_qualify/%ce%b5%ce%ba%ce%b8%ce%ad%cf%83%ce%b5%ce%b9%cf%82
- ⁹ Ibid
- ¹⁰ Covers the installation of energy efficient windows and doors.
- ¹¹ Components of the Training Methodology, WE-Qualify, Cyprus Energy Agency:
Μεθοδολογία κατάρτισης εγκαταστατών θερμομόνωσης και εγκαταστατών κουφωμάτων (Αγγλικά) at
http://www.cea.org.cy/we_qualify/%ce%b5%ce%ba%ce%b8%ce%ad%cf%83%ce%b5%ce%b9%cf%82
- ¹² Components of the Training Methodology, WE-Qualify, Cyprus Energy Agency:
Μεθοδολογία κατάρτισης εγκαταστατών λεβήτων και θερμαστών βιομάζας (Ελληνικά) at
http://www.cea.org.cy/we_qualify/%ce%b5%ce%ba%ce%b8%ce%ad%cf%83%ce%b5%ce%b9%cf%82
- ¹³ Gold News (2016), Cyprus Training Programme Shortlisted in European Competition.
<http://www.goldnews.com.cy/favicon.ico/companies/cyprus-training-programme-shortlisted-in-european-competition>
- ¹⁴ Components of the Training Methodology, WE-Qualify, Cyprus Energy Agency:
Μεθοδολογία κατάρτισης εγκαταστατών θερμομόνωσης και εγκαταστατών κουφωμάτων (Αγγλικά) at
http://www.cea.org.cy/we_qualify
- ¹⁵ Components of the Training Methodology, WE-Qualify, Cyprus Energy Agency:
Μεθοδολογία κατάρτισης εγκαταστατών λεβήτων και θερμαστών βιομάζας (Ελληνικά) at
http://www.cea.org.cy/we_qualify/%ce%b5%ce%ba%ce%b8%ce%ad%cf%83%ce%b5%ce%b9%cf%82
- ¹⁶ List of certified installers: http://www.cea.org.cy/we_qualify/
- ¹⁷ WE-Qualify Presentation, QUALICheck Roadshow, Cyprus Energy Agency 2016:
https://www.cyi.ac.cy/images/Events/qualicheck_roadshow_070316/docs/16_03_07_Build_Up_Skills_WE_Qualify_Anthi_Charalambous.pdf
Training delivery confirmed by interview with Coordinator.
- ¹⁸ Technological University of Cyprus, University of Cyprus and University of Nicosia (Intercollege).
- ¹⁹ Ministry of Education and Culture, and the Energy Service of the Ministry of Commerce, Industry and Tourism.
- ²⁰ Cyprus Employers and Industrialists Federation / Ομοσπονδία Εργοδοτών & Βιομηχάνων (OEB) Κύπρου
- ²¹ WE-Qualify: Evaluation of training materials and tools, Evaluation report and list of the performed revisions, April 2016:
Έκθεση αξιολόγησης και αναθεωρήσεων (Ελληνικά) at
http://www.cea.org.cy/we_qualify/%CE%B5%CE%BA%CE%B8%CE%AD%CF%83%CE%B5%CE%B9%CF%82
- ²² In collaboration with the Institute of Agriculture Research.
- ²³ No examinations followed completion of the Biomass Heating Systems training course, as Cyprus does not yet have an appropriate examination board for biomass. Certificates of attendance were given to each participant that completed the biomass course. This information was sourced from an interview with the WE-Qualify Coordinator at the Cyprus Energy Agency.
- ²⁴ Cyprus Energy Agency, Final Project Assessment Workshop (31 Oct 2016), Final presentation on WE-Qualify results:
http://www.cea.org.cy/we_qualify/wp-content/uploads/2016/10/01-PKastanias_CEA.pdf
- ²⁵ Reference to interview held with Cyprus Energy Agency on 2nd December 2016.
- ²⁶ Cyprus Energy Agency, Final Project Assessment Workshop (31 Oct 2016), Final presentation on WE-Qualify results:
http://www.cea.org.cy/we_qualify/wp-content/uploads/2016/10/01-PKastanias_CEA.pdf

²⁷ Ibid

²⁸ Ibid

²⁹ Ibid

³⁰ European Commission, Construction 2020 Action Plan, 2012:
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0433:FIN:EN:PDF>

³¹ Reference to interview held with Halloumas Construction Consultants Ltd on 1st December 2016.

³² Reference to interview held with Cyprus Energy Agency on 2nd December, 2016.