



TRAINING OF PHOTOVOLTAIC INSTALLERS

**Development and implementation of a common
certification scheme for PV installers**

***List of Training Organisations
(WP5 -D5.9)***

***Final Version
April 2013***



Issued by BRE, April 2013

Contract N°: IEE/09/928/SI2.558379



PVTRIN: The PVTRIN project scope is the development of a training and certification scheme for technicians, according common accepted criteria and standards, focused on the installation and maintenance of small scale PV.

The expected results are: Accredited training courses and an operational certification scheme for PV installers in 6 participating countries; Practical training material/tools for installers and their trainers; Web portal with access to technical information on PV installation/integration; 8 pilot training courses implemented, a pool of skilled/certified PV installers; A roadmap for the adoption of the certification scheme across Europe.

Long term, PVTRIN will contribute to the PV/BIPV market growth in the participating countries, provide a supporting instrument for EU MS to meet their obligations for acknowledged certifications for RES installers till 31/12/2012 and enforce the MS efforts to achieve the mandatory target of a 20% share of energy from RES in overall Community energy consumption by 2020. The PVTRIN is co-financed by the Intelligent Energy - Europe (IEE) programme.

PROJECT COORDINATOR

Associate Professor Theocharis Tsoutsos, Renewable and Sustainable Energy Systems Lab.
Environmental Engineering Dpt., TECHNICAL UNIVERSITY OF CRETE (TUC)

PROJECT PARTNERS

Agency of Brasov for the Management of Energy & Environment (ABMEE)	Romania
Building Research Establishment Limited (BRE)	UK
Energy Institute Hrvoje Požar (EIHP)	Croatia
European Photovoltaic Industry Association (EPIA)	EU
Scientific and Technical Chamber of Cyprus (ETEK)	Cyprus
Sofia Energy Centre (SEC)	Bulgaria
Technical Chamber of Greece -Western Crete (TEE)	Greece
TECNALIA Research & Innovation (TECNALIA)	Spain

WP5 LEADER

BRE

DELIVERABLE EDITOR

BRE

Contributors

ABMEE, EIHP, EPIA, ETEK, SEC, TEE, TUC, TECNALIA

LEGAL NOTICE

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.

Reproduction is authorised provided the source is acknowledged.

pvtrin@pvtrin.eu, www.pvtrin.eu



Contents

Executive Summary	4
Bulgaria	5
Croatia	6
Cyprus	7
Greece	8
Romania	10
Spain	11
Accreditation bodies for each PVTRIN participating country.....	12



Executive Summary

This document identifies organisations that provided training for each of the PVTRIN pilot courses run in the participating countries.

The certification of PVTRIN installers requires training from organisations accredited to ISO/IEC 17024 for delivery of the PVTRIN training course. This is the preferred training option route for PVTRIN installers. However, it became apparent during the project that there were no organisations currently accredited to ISO/IEC 17024 that offer training in the installation of PV systems or other renewable energy technologies within the PVTRIN participating countries. Consequently an additional option for training was developed in which an officially recognised training organisation may award a nationally recognised PVTRIN qualification. This would then be used by an appropriately accredited certification body as evidence of compliance with the requirements of the PVTRIN scheme so that a certificate may be issued.

This document also lists the training providers for each PVTRIN participating country.



Bulgaria

In Bulgaria the PVTRIN training course was delivered by the Henry Ford Vocational School from 19th January up to the end of February 2013. The school is accredited for training of renewable energy system (RES) installers and for long-life training (the PVTRIN training course is recognised under this scheme).

The recognition of national qualifications in Bulgaria is generally the responsibility of the National Agency for Vocational Education and Training (NAVET). NAVET is Bulgaria's most important institution working in the field of education, training and labour. NAVET is a state legal entity that is under the direct sub-ordination of the Council of Ministries and it is authorised to perform education and continuing training system in the country.

Discussions with NAVET have indicated that the PVTRIN course is expected to meet the national recognition requirements. To get this accreditation all training materials, including the internet platform have to be presented to NAVET who will then require at least 3 months to issue accreditation.



Croatia

PVTRIN training in Croatia is provided by Technical school Rijeka, Vukovarska 58, HR-51000 Rijeka. The school is nationally recognized for education of adults in areas of mechanical engineering and naval construction, and is cooperating closely with the Technical Faculty of Rijeka, which is situated nearby.

This training provider was selected in cooperation with Croatian NCC member Regional Energy Agency Kvarner from Rijeka. Rijeka is the largest city on the Croatian northern coast of Adriatic sea - a region which has the highest number of installed PV plants in Croatia.

The Technical school Rijeka, secondary education school for mechanical engineering and naval construction was selected because they are accredited by the Croatian Ministry of Education for Lifelong learning of adults and they have the technical capacities to carry out practical training in PV systems. This institution was audited by HDKBR, a certification body involved in PVTRIN certification, in order to assess administrative and technical capacities needed for delivering PVTRIN training course. Administrative personnel capacities, applicable processes, quality management system, technical capacities (classroom, training polygon) and trainers were audited during this process.

Trainers are selected based on criteria of professional experience in the PV field, as well as experience in teaching. In this way, Mr. Franković, an associate professor from the Technical Faculty of Rijeka was selected as the trainer for the theoretical part of the PVTRIN training and Mr. Kauzlarić, a professor from the Technical school Ruđer Bošković, Zagreb, was selected as the trainer for the practical element.

70 applications were received for the pilot training course in Croatia from which 25 (five more than expected) were enrolled on the course. The course was held during February/March 2013 with examinations taking place on 16 March.



Cyprus

In Cyprus PVTRIN pilot course training was delivered by the Cyprus Productivity Centre (CPC) - a public organization that was established in 1963 and administratively is a Department of the Ministry of Labour and Social Insurance.

CPC offers accelerated initial training and continuing training for technical personnel in industry and technical advice to businesses for solving specific problems. Training programs are organized in specially equipped laboratories in Nicosia, Limassol and Larnaca by qualified instructors.

The CPC focuses on areas of activity which support the development of individuals, companies and organizations, social partners and state authorities, helping them to adjust to the rapidly changing training and work environment.

The CPC has made a useful contribution to the socioeconomic development of Cyprus for over 40 years and has in the process accumulated a wealth of knowledge and expertise which constitutes its major area of strength. Today the CPC assumes a particularly important role, on behalf of the Ministry of Labour and Social Insurance, in the areas of management development, training and productivity aiming at the best possible utilisation of human and capital resources and the improvement of quality of life within the European Union.

The long standing objective of the CPC is continuous improvement, the introduction of innovation and the provision of new services, programs and activities based on the needs of organizations and their employees, thus contributing to the enhancement of their competitiveness and supporting them so that they are able to face successfully the challenges of the 21st century.



Greece

In Greece, the PVTRIN training course was developed by the Technical University of Crete (TUC), according to the PVTRIN Training and Certification scheme and was approved by the NCC members. The PVTRIN certification scheme was developed by the national technical committee created for this purpose. Members of the committee are the Technical University of Crete (TUC), the Hellenic Association of Accredited Certification and Inspection Bodies (HellasCert) as Chair, the Greek PV industry Association, the Panhellenic Federation of Electrical Contractors Associations, the Panellenic Federation of PV Investors and the Technical Chamber of Greece. The scheme was submitted to the National Accreditation Body for accreditation in September 2012. Validation is expected shortly following completion of the pilot courses (process usually lasts 3-6 months).

HellasCert is a member of the Greek National Consultation Committee and scopes to maintain/operate the PVTRIN scheme in Greece once the PVTRIN project is completed. The Technical Committee constituted for the development and submission of the scheme to the National Accreditation Body will also continue the support and operation of the scheme and will undertake any revisions required in the future.

Members of the Scheme's Technical Committee are all key stakeholders of the PV market in Greece, including, the National Association of PV companies, the Federation of Electrical Contractors Associations, the Association of PV installers. Furthermore the scheme will be available to all members of HellasCert who are acknowledged for Personnel Certification and run under the ISO 17024.

The Certification Body that issued PVTRIN Certification following to the PVTRIN pilot courses is PeopleCert, one of the competent members of HellasCert. PeopleCert is Accredited with ISO 17024 as Personnel Certification Body, Certified by ISO 9001 for Quality Management, ISO 10002 for Customer Satisfaction & Complaints Handling, ISO 14001 for Environmental Management, ISO 27001 for Information & Data Security. PeopleCert is a Full Member of the International Personnel Certification Association (IPC), is awarded with the "Committed to Excellence" distinction from the European Foundation of Quality Management (EFQM), has delivered to date 3,000,000+ exams and involves 100+ full time employees and 1,000+ external associates

The following training organisations have delivered the PVTRIN pilot courses:

For courses in Crete

- Technical University of Crete



For courses in Athens

- IEKEM TEE (theory classes), which assigned the practical classes to CRES (PV lab and installation premises with the appropriate facilities)

These organisations are recognised by the National Organisation for the Certification of Qualifications and Vocational Guidance EOPPEP.

EOPPEP operates under the supervision of the Ministry of Education & Religious Affairs, Culture & Sports. It was formed from the amalgamation of three national bodies, the National Centre for the Accreditation of Lifelong Learning Providers (EKEPIS), the National Organisation for the Certification of Qualifications (EOPP) & the National Centre for Vocational Guidance (EKEP).

EOPPEP develops and implements comprehensive national systems for the accreditation of non-formal & informal learning and provides scientific and technical support in designing and implementing the vocational guidance national policy, as well as the provision of such services in Greece.

More training providers, also acknowledged by EOPPEP, have indicated their interest to deliver PVTRIN training courses, not only in Athens but also in other cities in Greece.



Romania

For the pilot courses in Romania the training provider was ABMEE. ABMEE is seeking authorization as a Professional Training Provider, according to Romanian national legislation and to ANC rules. A requirement of this was that ABMEE had to firstly obtain “Professional Trainer” Certification, and then “Train-the-Trainer” Certification, both necessary in the authorization submission forms for becoming a Nationally Acknowledged Training Provider. ABMEE also collaborated with an external partner – Kronstadt Renewable Energy (KER) who provided two trainers and the laboratory facilities for the practical activities.

For the pilot courses in Romania ABMEE has implemented a specialisation course, authorized by the Romanian National Authority for Qualifications (ANC) with authorization number 001042/2012. ANC is a new organisation formed from the merger of ACPART (the EQF National Contact Point for Romania) and the former National Counsel for Adults Vocational Training.

The development of the new national qualification involves the following steps:

- Conduct an Occupational Analysis following a national methodology (the PVTRIN project provided most of the information needed for this)
- This Occupational Analysis is then verified by ANC appointed experts and validated by a Sector Committee
- The next step is to make an Occupational Standard (following another national methodology) which will also have to be verified by ANC appointed experts
- Once the Occupational Analysis and Occupational Standard are validated, the national qualification may be developed according to the Occupational Standard
- This is then also verified by the ANC appointed experts and validated by the National Counsel for Adults Vocational Training
- Finally the qualification is validated by the Sector Committee and approved by the Board of the National Counsel for Adults Vocational Training



Spain

In Spain, the PVTRIN training course was developed by TECNALIA in collaboration with TKNIKA (Centre for Innovation in Basque Vocational Training, member of NCC) and Usurbil VET School (with experience in RES training courses), according to the PVTRIN Training and Certification scheme and was approved by the NCC members.

PVTRIN training is provided by the Zubigune Foundation, a private and nonprofit organisation resulting from a partnership between business, the Usurbil VET School and technology centres. Its mission is the promotion and development of continuing education and lifelong learning in the areas of electricity, electronics, installation and maintenance, energy and water, mechanical manufacturing and administration and management and other environmental disciplines.

Usurbil VET School is a Vocational Educational Training Centre recognised by the Education department of the Basque Government and LANBIDE-Basque Employment Service (the government department responsible for qualifications) to deliver training in renewable energy systems.

The pilot course took place at the Usurbil Vocational Training Centre (Etarde Bidea 9, 20170 Usurbil, Guipuzcoa) during February and March 2012.

As PVTRIN certification is not already implemented in Spain (see D5.8) PVTRIN students may apply for the existing PV Professional Certification for Assembly and maintenance of photovoltaic solar installations-Level2, following the agreed procedure of evaluation and accreditation of skills acquired through work experience or non-formal training. This will involve recognition of the training received from the PVTRIN course in addition to other informal training and work experience of PVTRIN installers.

TECNALIA is also in negotiations with FENIE (as National Installer Association) to make an application to the General Council for Vocational Training (Sp.acronym CGFP) for the PVTRIN course to be officially recognised and to ask INCUAL to recognise PVTRIN training as part of requirements for the two existing Spanish PV Professional Certification schemes (see D5.8).

Even though PVTRIN certification is not already a reality in Spain this has not reduced the interest in it. It is considered that this is because of its European wide scope. TECNALIA has also received expressions of interest from a number of training providers who would like to deliver PVTRIN courses in the future. (Some of them already recognised by the Education Department and Employment Service for delivering PV Training courses attached to Professional Certifications).



Accreditation bodies for each PVTRIN participating country

Country	National Accreditation Body	Website
BULGARIA	Bulgarian Accreditation Service (BAS)	www.nab-bas.bg
CROATIA	Croatian Accreditation Agency (HAA)	www.akreditacija.hr
CYPRUS	The Cyprus Organization for the Promotion of Quality (CYS-CYSAB)	www.cys.mcit.gov.cy
GREECE	Hellenic Accreditation System S.A. (ESYD)	www.esyd.gr
ROMANIA	Romanian Accreditation Association (RENAR)	www.renar.ro
SPAIN	Entidad Nacional de Acreditacion (ENAC)	www.enac.es

