



PVTRIN Training and Certification of PV installers in Europe

Raising standards and promoting confidence

Dr. Theocharis Tsoutsos, Assoc. Prof.
Technical University of Crete

Install+RES and PVTRIN Strategic Workshop, Brussels, 12th March 2013



The PVTRIN Scope



Development of training and certification scheme for technicians active in the installation and maintenance of small scale PV systems

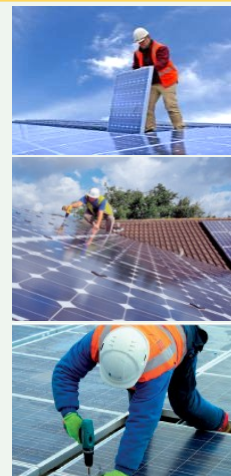
Aim:

To set the base for the adoption of a mutually acknowledged certification scheme in EU

Duration: May 2010 – April 2013

Countries of implementation: Greece, Bulgaria, Croatia, Cyprus, Romania, Spain

Project Coordination: Technical University of Crete, Greece



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



Background



- RES applications require **highly-qualified installers** to ensure a good functioning of systems
- In general, **markets are growing faster than the qualified PV installers force**
- Developers/ Designers/Potential investors seek for **skills' certification and quality assurance** in a PV project (design, installation, and maintenance) to ensure higher performance
- **Lack of accredited training and certification schemes** for PV installers in most EU countries
- **EU policy** forcing for acknowledged qualifications and certification schemes

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



PVTRIN supports EU policy and targets



PVTRIN addresses to the 2009/28/EC Directive, incorporating the criteria set for qualification schemes, certified training courses and accredited training providers in each MS

****"Member States shall ensure that certification schemes or equivalent qualification schemes become or are available by 31 December 2012 for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps. Each Member State shall recognise certification awarded by other Member States in accordance with those criteria".***

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



PV TRIN success stories



- Created a **new professional framework** in most of the countries participated
- Has very **high added value** especially for countries with no PV certification scheme
- Generated **new training material** (trainers, trainees, e-platform etc) with **specifications** defined by the PV market stakeholders
- **Common guidelines** integrated according to the **national conditions** created the new certification schemes; impact in the national policies

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



Benefits for the installers, the PV industry and the society 1/2



- Creating a qualified installers workforce, PVTRIN supports the **EU PV Industry** for skilled technicians. The increased confidence of PV investors will lead to market growth.
- The **trained installers** gain professional competitive advantage, improving their technical skills and knowledge; the certification provides a "passport" to the EU job market. The training material, tools and web platform will provide them a "24/7" technical assistance.

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



Benefits for the installers, the PV industry and the society 2/2



- ❑ **Developers and engineers** will profit by skilled installers. Involving them in their PV projects means efficient installations, less technical failures and satisfied customers
- ❑ **PV investors** win confidence that the appropriate level of quality and performance is met and maintained for their PV system
- ❑ **National authorities** will find a supporting instrument to meet their obligations for acknowledged certifications for RES installers
- ❑ **The entire society** is to benefit; the higher PV penetration to the energy mix will reduce the greenhouse gas emissions improving citizens' quality of life.

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



PVTRIN Consortium



Project Partners	Country
TECHNICAL UNIVERSITY OF CRETE ENVIRONMENTAL ENGINEERING dpt. RENEWABLE AND SUSTAINABLE ENERGY SYSTEMS LAB PROJECT COORDINATOR	GREECE
AGENCY OF BRASOV FOR THE MANAGEMENT OF ENERGY AND ENVIRONMENT	ROMANIA
BUILDING RESEARCH ESTABLISHMENT LTD	UK
ENERGY INSTITUTE HRVOJE POŽAR	CROATIA
EUROPEAN PHOTOVOLTAIC INDUSTRY ASSOCIATION	EU / BELGIUM
SCIENTIFIC AND TECHNICAL CHAMBER OF CYPRUS	CYPRUS
SOPIA ENERGY CENTRE	BULGARIA
TECNALIA RESEARCH AND INNOVATION	SPAIN
TECHNICAL CHAMBER OF GREECE - WESTERN CRETE	GREECE

www.pvtrin.eu



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB





For more information contact the project coordinator:



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB

Assoc. Professor Theocharis Tsoutsos
University Campus, Kounoupidiana, 73100 Chania
Tel +30 28210 3 7825
Theocharis.tsoutsos@enveng.tuc.gr
www.pvtrin.eu, www.resel.tuc.gr



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB

