

## **Vocational Training Courses**

## SUBSIDISED BY THE HUMAN RESOURCE DEVELOPMENT AUTHORITY

Our group is involved with activities in the wider field of Renewable Energy, specialising in the area of Photovoltaics!







Driven by the vision that education has an ever more important role in propelling climate action and most importantly prepare our future generations to be resilient to the unprecedented changes, the PV Technology Laboratory has placed it high on its priority list.

The PV Technology Lab has intensified its efforts to shape the wide range of educational activities it offers. As climate change and energy security is an intergenerational and multifaceted problem, it has tailored its educational courses to meet a variety of people of different age groups, educational backgrounds, and a cross-section of topics.

The PV Technology Lab currently offers Vocational Training Courses on topics such as PV systems [Designer and Installer], Battery Energy Storage Systems, Building Integrated Photovoltaics, Nearly Zero Energy Buildings, Commissioning tests and inspection according to EN 62446 standard and a course on the new rules of the electricity market in Cyprus. In fact, the PV Technology Laboratory has enriched its vocational training programme with two new training courses on Battery Storage: "Battery Energy Storage Systems Installation Practices" (12 hrs) and "Energy Storage: Diverse role in the modern Electricity Network" (30 hrs).

The PV Technology Lab strives to continue to acquire and disseminate knowledge!

"I have attended a few events and courses on PV systems at the PV Technology Lab and I found them all very well prepared and organized and very relevant to my interests.."

[LinkedIn review by course participant]



## The following courses are offered upon request:

#### PV SYSTEM DESIGNER AND INSTALLER

This course covers theoretical and practical aspects for trainees to develop skills and understanding on the design and installation of both stand-alone and grid-connected photovoltaic (PV) systems alongside with innovative topics such as self-consumption, smart meters and storage.

The main topics covered throughout the course include initial site assessments of the installation area using site-survey equipment, the risk assessment analysis, system design, installation and basics of commissioning, maintaining and troubleshooting PV systems.

#### FEES:

- HRDA Eligible: €120 [HRDA subsidy: €4801
- Non-HRDA Eligible: €600

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific criteria.

**COURSE DURATION: 40 hrs** 

#### DATES:

Theoretical part: dates will be announced soon

Practical part [physical presence required]: dates will be announced soon

**Exam [physical presence required]:** date will be announced soon

\*The course is available every March and every November on a yearly basis.

Emphasis will also be given to all the requirements of a grid-connected PV system according to all related international standards with main focus the design qualification and type approval requirements of terrestrial PV modules, as outlined in IEC 61215 and 61646. The general performance testing requirements according to IEC 62446 will also be defined.

Candidates will have the opportunity to operate professional state-of-the-art equipment (located only in a few places globally) and to be trained by worldwide renowned personnel. Participants upon completion, can register to the registry of the Ministry of Energy.



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PV SYSTEM DESIGNER AND INSTALLER









# ENERGY STORAGE: DIVERSE ROLE IN THE MODERN ELECTRICITY NETWORK

This course covers theoretical and practical aspects for trainees to develop skills and understanding on Energy Storage and specifically, as regards to home systems. It includes the design, installation and operation of Energy Storage Systems integrated in buildings combined with Renewable Energy Systems and specifically, Photovoltaic (PV) systems.

Additionally, the programme is introductory to Energy Communities and the integration of Battery Energy Storage Systems according to the recent European legislative framework. Last, but not least, the programme provides an introduction to the Smart Grid and the various services that the Energy Storage Systems can offer to the Smart Grid.

#### FEES:

- HRDA Eligible: €120 [HRDA subsidy: €4801
- Non-HRDA Eligible: €600

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific

**COURSE DURATION: 30 hrs** (theoretical 20hrs, practical 10hrs)

#### DATES:

Theoretical part [virtual - ZOOM]: dates will be announced at a later stage.

Practical part [physical presence required]: dates will be announced at a later stage.

**Online Exam:** date will be announced at a later stage.

\*The course is available every May and November on a yearly basis.

The program is aimed mainly at companies or organizations that focus on the acquisition of vocational training skills for their staff on the Energy Storage Systems, so that these skills will be of use for the company/organization in order to attract new clients and to lay the foundations for their future work in the rapidly expanding sector of Energy Storage, according to the recent legislative framework on Energy Storage Systems in Cyprus.



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#### BATTERY ENERGY STORAGE SYSTEMS INSTALLATION PRACTICES

This course covers theoretical and practical aspects for trainees to develop skills and understanding on Energy Storage and specifically, as regards to home systems. It includes the installation and operation of Energy Storage Systems integrated in buildings, combined with Renewable Energy Systems and specifically, Photovoltaic (PV) systems.

The program is aimed mainly at companies or organizations that focus on the acquisition of vocational training skills for their staff on Battery Energy Storage Systems, so that these skills will be used for attracting new clients and to lay the foundations for their future work in the rapidly expanding sector of Energy Storage, according to the recent legislative framework on Energy Storage Systems in Cyprus.

The program is aimed mainly at employees of companies or organizations, namely Electrical Engineers, Mechanical Engineers who are professionally involved in the field of electrical installations and specifically, PV Systems and Battery Storage.



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#### FEES:

- HRDA Eligible: €96 [HRDA subsidy:
   €204]
- Non-HRDA Eligible: €300

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific criteria

**COURSE DURATION: 12 hrs** (practical)

**DATES:** [physical presence required]: dates will be announced at a later stage.





COURSES ON ENERGY STORAGE SYSTEMS







#### FUNDAMENTALS OF NEARLY ZERO ENERGY BUILDINGS

This course covers theoretical and practical aspects of building integrated photovoltaics (BIPV) in the realm of nealry zero energy buildings (NZEB).

The objective of the course is to train participants in NZEB strategies and technologies in order to accelerate the adaptation of the recast EU Energy Performance inBuildings Directive (EPBD), which includes the obligation for all public buildings constructed after the 31st December 2018 and all buildings constructed after the 31st December 2020 to meet the EPBD NZEB standard.

The program is aimed mainly at employees of companies/ organizations in the construction sector and in particular Architects, Electrical Engineers, Mechanical engineers, Civil Engineers and Environmental Engineers.

The academic qualifications and experience of candidates must comply with Annex III (Regulation 15) of the Republic of Cyprus 19/2014.



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#### FEES:

- HRDA Eligible: €143 [HRDA subsidy: €357]
- Non-HRDA Eligible: €500

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific criteria

COURSE DURATION: 21 hrs (theoretical 15hrs, practical 6hrs)

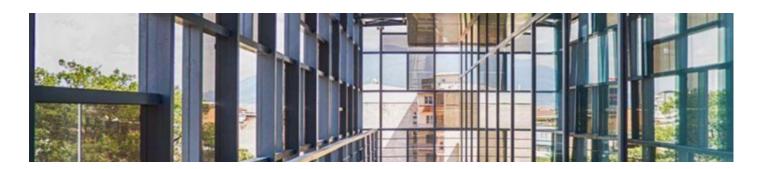
**DATES:** will be announced at a later stage.

**EXAM:** date will be announced at a later stage [physical presence required].





#### FUNDAMENTALS OF BUILDING INTEGRATED PHOTOVOLTAICS



Building-integrated photovoltaics (BIPV) is currently an expansive market. One of its main drivers is the increasingly demanding legislation related to energy performance in buildings. Renewable energy technologies, and in particular the integration of photovoltaic systems in the building environment offer many possibilities to play a major role within the Nearly Zero Energy Building (NZEB) scenario.

The program provides the necessary theoretical and practical background for the operation, design and installation of new technologies of Photovoltaic (PV) systems integrated in the building shell, thus covering the great need

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**COURSE DURATION: 21 hrs** (theoretical 15hrs, practical 6hrs).

**DATES:** will be announced at a later stage.

**EXAM:** date will be announced at a later stage [physical presence required].

of companies for specialized services in the field of PV systems installations, so that the skills that will be acquired will be used to attract new customers and lay the foundations for their future work in this rapidly growing field. The program is aimed mainly at companies or organizations that focus on the acquisition of vocational training skills for their staff on the design and installation of new Photovoltaic systems, (especially of building integrated technologies), so that the acquired skills will be of use for the company/organization in order to attract new clients and to lay the foundations for their future work in the rapidly expanding sector of Energy Storage, according to the recent legislative framework on Energy Storage Systems in Cyprus.

The program is mainly aimed at employees of companies and/or organizations that are Electricians, Electrical Engineers, Mechanical Engineers, as well as engineers of other areas who are active in the field of electrical installations and RES in general.

The academic qualifications and experience of candidates must comply with Annex III (Regulation 15) of the Republic of Cyprus 19/2014.

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#### FUNDAMENTALS OF BUILDING INTEGRATED PHOTOVOLTAICS







## COMMISSIONING TESTS AND INSPECTION ACCORDING TO EN 62446 STANDARD

Ensuring the long-term quality and safety of a PV system is a necessary requirement in order to assure the best performance and to minimize risks of failure. In addition, the periodic verification of system performance is of utmost importance so as to check whether the system complies with warranty and equipment guarantees, minimizing in this way investment risks.

This course covers theoretical and practical aspects for trainees to develop skills and understanding on the minimum requirements for documentation, commissioning and inspection of grid connected PV systems according to IEC 62446.

Candidates will have the opportunity to operate professional stateof-the-art equipment (located only in a few places globally) and to be trained by worldwide renowned personnel.



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#### FEES:

- HRDA Eligible: €143 [HRDA subsidy: €357]
- Non-HRDA Eligible: €500

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific criteria

**COURSE DURATION: 21 hrs** (theoretical 15hrs, practical 6hrs).

**DATES:** will be announced at a later stage.

**EXAM:** date will be announced at a later stage [physical presence required].





#### NEW RULES OF THE ELECTRICITY MARKET IN CYPRUS

This program attempts to train participants regarding the operation of Competitive Electricity Markets, which meet a rapid growth worldwide and especially in Europe, the latest years, according to the current Transitional Regulation in the Cyprus Electricity Market.

The main purpose of the program is the acquaintance with the different Energy Markets that will be operating in Cyprus with the forthcoming opening of the Cyprus Electricity Market ,the provision of information regarding the products traded in markets, the trading methods, the mechanisms of pricing and the presentation of key principles and investment Energy Market Strategies.

The program is mainly aimed at employees of companies and/or organizations that are active in the field of electrical installations and especially Renewable Energy Sources (RES), such as Accountants/Economists, Lawyers, Electrical Engineers or engineers of other areas who are professionally involved in the field of Electricity Market.

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#### FEES:

- HRDA Eligible: €162 [HRDA subsidy: €238]
- Non-HRDA Eligible: €400

\*HRDA is a subsidy provided to companies registered in Cyprus that meet specific criteria

**COURSE DURATION: 14 hrs** (theoretical 14hrs).

DATES: will be announced at a later stage.

**EXAM:** date will be announced at a later stage [physical presence required]. \*Pending HRDA programme specification approval





#### MEET OUR TRAINERS!





Prof. George E. Georghiou George E. Georghiou is a Professor and the Director of FOSS Research Centre for Sustainable Energy, University of Cyprus. Prior to this, he was a Lecturer and the undergraduate course leader in Electrical Engineering at the University of Southampton, and a Research Fellow at the Electricity Utilization Group, University of Cambridge. Having graduated from the University of Cambridge with a BA, MEng, MA all with distinction and a PhD, Dr Georghiou continued his work at the University of Cambridge in the capacity of a Research Fellow (1999-2002). Dr Georghiou is currently a member of the CENELEC and IEC committees on PV and is acting as an expert evaluator for Horizon 2020 energy proposals as well as being a member of CIGRE and the European Solar Energy Industrial Initiative. He also represents Cyprus on the SET plan steering committee and sits on the board of the Cyprus Energy Agency. He has recently been appointed by the President of Cyprus to the National Energy Policy Council to advise the government on energy issues. Dr Georghiou has published over 400 papers in international journals and conference proceedings and his team has obtained research funding in excess of 20 million Euros from bodies such as the European Union, Industry (such as Honeywell, Q Cells etc), the National Funding Agency etc. Amongst his scholarly achievements, are five outstanding paper awards for the most significant technical scientific contributions and an innovation prize.



Dr George Makrides is the Head of Renewables and Grid integration group and the Quality Manager of the PV Technology Laboratory of the University of Cyprus. He has received his PhD by the University of Cyprus in 2012 and the MPhil degree in Engineering at Cambridge University in 2004, where he also received the Cambridge Commonwealth Trust scholarship.

Prior to this he had received the BEng Honours degree in Electrical and Electronic Engineering at Queen Mary University of London with a high overall mark (First class Honours). He has published over 100 papers in international journals and conference proceedings and has participated successfully in various local and European research funded projects.

His work on the outdoor performance of PV technologies throughout the years, has been the initiation for the establishment of the PV outdoor infrastructure and testing centre in Cyprus for many manufacturers such as Honeywell, Q Cells, Tel-Solar, TSMC and others.

#### VOCATIONAL TRAINING



#### MEET OUR TRAINERS!





Nikolas Chatzigeorgiou received his BSc degree in Electrical Engineering from the Cyprus University of Technology in 2016. He continued his studies at the Heriot-Watt University in Edinburgh where he received his MSc in Renewable Energy Engineering with Distinction in 2017. His postgraduate thesis regarded battery management in Demand Side Response schemes. He was offered a fully funded ETP PhD scholarship after graduation in the field of Demand Side Response.

He is a Certified Electrical Engineer (3rd class) and a member of the Cyprus Scientific and Technical Chamber. Also, he is a Certified PV System Designer and Installer and a Certified Trainer of Vocational Training (level 5 Vocational Training Qualification).

Since 2017, he is employed as a Researcher (Special Scientist/ Electrical Engineer) at the PV Technology Lab of FOSS Research Centre for Sustainable Energy of the University of Cyprus, in the fields of PV Systems, Energy Storage and Nearly Zero Energy Buildings. He is also a Teaching Assistant at the University of Cyprus (Department of Electrical and Computer Engineering).



### **PV TECHNOLOGY LAB COURSES**

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- Due to COVID-19 pandemic, the theoretical part of all courses will de held online (via ZOOM platform).
- Physical presence will be required, only for the practical part of each course.
- Limited number of places available.
- All participants who will successfully compete the programme, will receive a Certificate of Completion!



#### VOCATIONAL TRAINING











## **CONTACT US**

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