



SUMMER SCHOOL STATE-OF-THE-ART PHOTOVOLTAIC SYSTEMS TECHNOLOGIES AND DESIGN

June 21st-23rd 2022
On-site event: University of Catania, Italy

Organised by



co-organized with



Università di Catania

MAIN TOPICS

- | STATE-OF-THE-ART TECHNICAL KNOWLEDGE ON DESIGN, PERFORMANCE AND OPERATION OF PV SYSTEMS
- | FOCUS ON BIFACIAL AND TRACKING TECHNOLOGIES
- | ON-SITE VISIT OF A PV DEMONSTRATOR
- | SHARE OF EXPERIENCE WITH EXPERTS FROM DIVERSE LEADING EUROPEAN COMPANIES AND INSTITUTIONS

CONDITIONS

- | FREE ADMISSION
- | HOSTING FEES
- | REGISTRATION REQUIRED

>>> www.gopvproject.eu

GLOBAL AGENDA

DAY 1

- | Introduction to GOPV Training | Solar Resource & Site Identification
- PV modules | PV Systems

DAY 2

- | Electrical Design | Structural Design | Performance Analysis

DAY 3

- | Economic & Environmental Aspects | Visit of the PV demonstrator

AUDIENCE

- | PHD STUDENTS
- | RESEARCHERS
- | ENGINEERS
- | TECHNICAL MANAGERS, TRAINERS

EXPERTS



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 792059



June 21st (09:00-17:30)

INTRODUCTION TO GOPV TRAINING - CEA-INES

SOLAR RESOURCE / SITE IDENTIFICATION - CEA-INES

- Solar Resource
- Solar Databases
- Uncertainties
- Site constraints and data
- Local acceptance and permitting



PV MODULES - EPFL

- PV effect & efficiency
- PV market
- Evolution of module technologies and costs
- Current trends
- Bifacial modules

PV SYTEMS - ENEL GREEN POWER & UNIVERSITY OF CATANIA

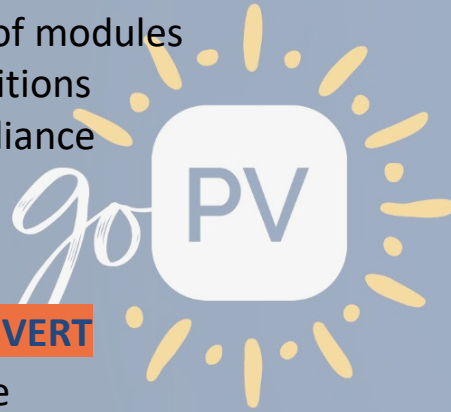
- Typology of systems and components
- Basic spatial layout planning
- Focus on large-scale PV power plants
- Details on components
- Types and operation of inverters

GLOBAL OPTIMIZATION OF
INTEGRATED **PHOTOVOLTAIC** SYSTEM
FOR LOW ELECTRICITY COST

June 22nd (09:00-16:00)

ELECTRICAL DESIGN - CEA-INES

- Electrical characteristics of modules
- Impacts of weather conditions
- Checking electrical compliance
- Sizing a PV plant



STRUCTURAL DESIGN – CONVERT

- Types of ground structure
- Anchoring and impact of site weather conditions
- Focus on tracker technologies
- Electronic control of tracker

PERFORMANCE ANALYSIS – TECNALIA / RSE / ENEL GREEN POWER

- Yield simulation at design phase (tools, modelling, main losses, examples)
- PV systems field performance (tools, procedures, standards and sensors for monitoring, calculation of KPIs, uncertainties)
- Case study on a MWp scale system under operation

June 23rd (09:00-16:00)

ECONOMIC & ENVIRONNEMENTAL ASPECTS – RSE & TECNALIA

- Calculation of LCOE
- Financial indicators
- Sensibility analysis
- Details on LCA / ISO standards and PVPS guideline
- GOPV approach and LCA

VISIT OF THE DEMONSTRATORS – CONVERT & ENEL GREEN POWER