

PHOTOVOLTAIC SOLAR ENERGY TEAM

RESEARCH, DEVELOPMENT AND INNOVATION

UJa.
Universidad de Jaén



(IDEA PV TEAM)

Location

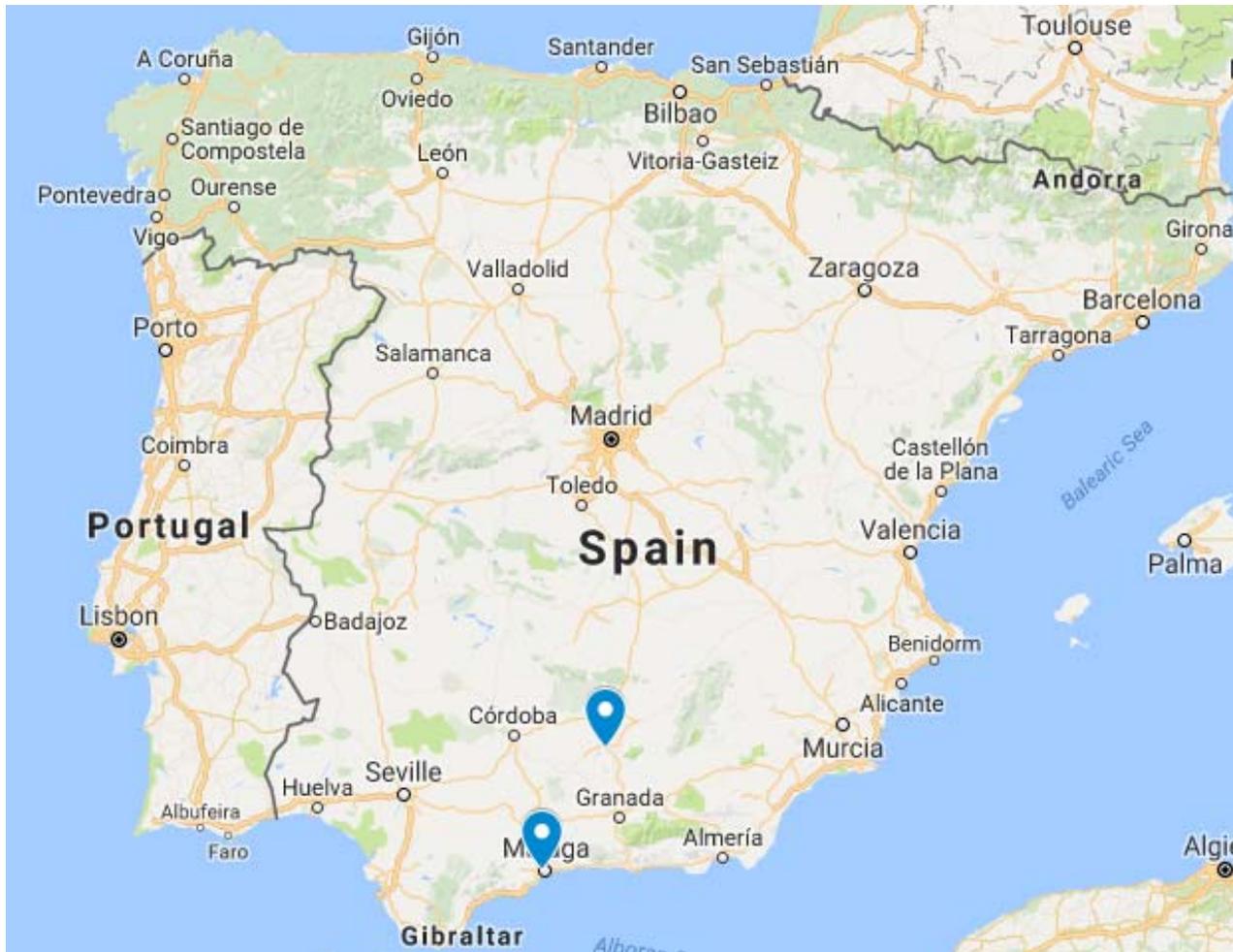


UJa.
Universidad de Jaén



development
projects
management
design
research
product
innovative and market R D
developing programme

**IDEA
PV Research
Team**



Jaén (37°46' N; 3°47' W)

Annual mean daily irradiation:
5.1 kWh·m⁻²·day⁻¹

Continental-Mediterranean
climate

Engineering and Technical Assessment

→ **Characterization, Evaluation and Quality control of PV modules and plants**

→ **Photovoltaic Design (inc. Economic analysis)**

- Infraestructure/Building Integration-Adaptation
- Distributed generation and micro-grids
- Self-Consumption
- PV plants (Floating, bifacial)
- Rural Electrification





Universidad
de Jaén



R&D PROJECTS



CONSULTING SERVICES

development
projects
research
management
design
product
innovative
and
market
R D
programme
technical
developing

UJa.es

Clean energy from road acoustic
barriers infrastructure development



Road/Rail Noise
Barriers + PV
(bifacial)

AGRADECIMIENTOS (Suministro de Pantallas Acústicas)

Paneles
ACH



PROYECTO FINANCIADO POR



Proyectos de I+D+i «Programación
Conjunta Internacional» 2018
(Proyecto: PCI2018-093082)



PV Projects/Solutions

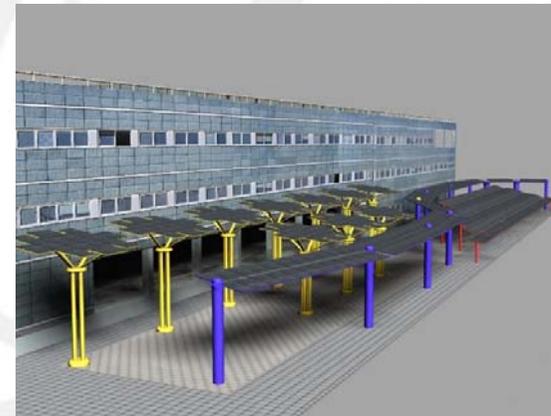
Building PV Integration/Adaptation



Modular Houses → Nearly Zero Energy Buildings



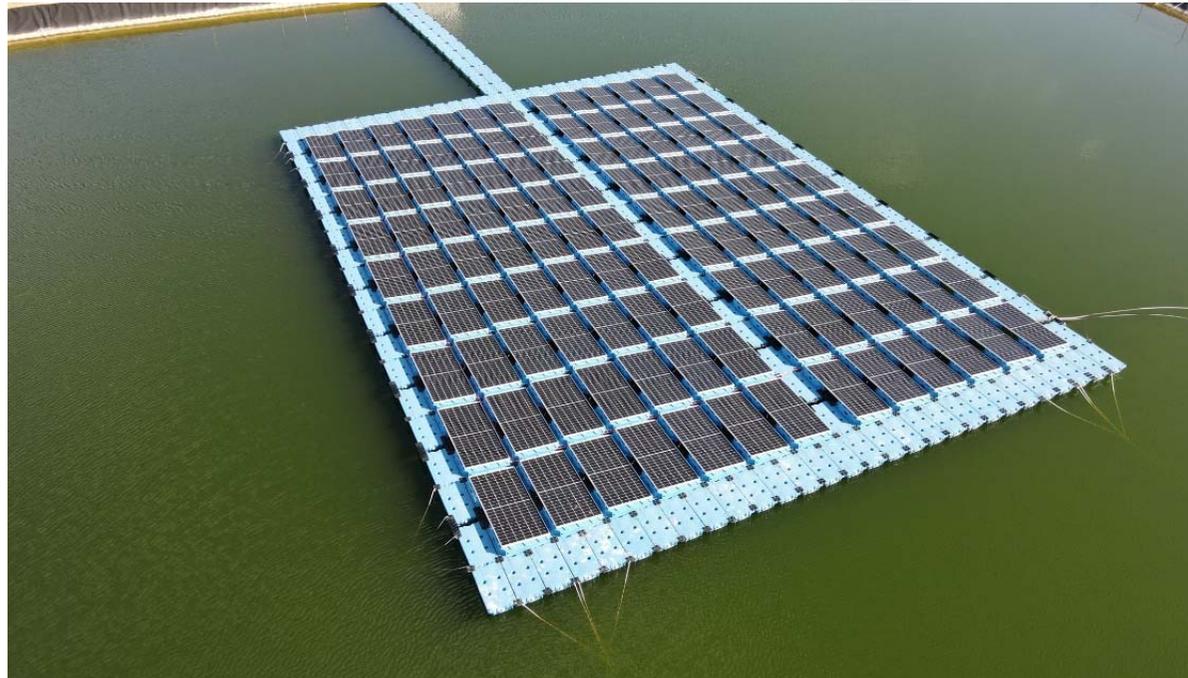
PV Potential Analysis



PV Projects/Solutions

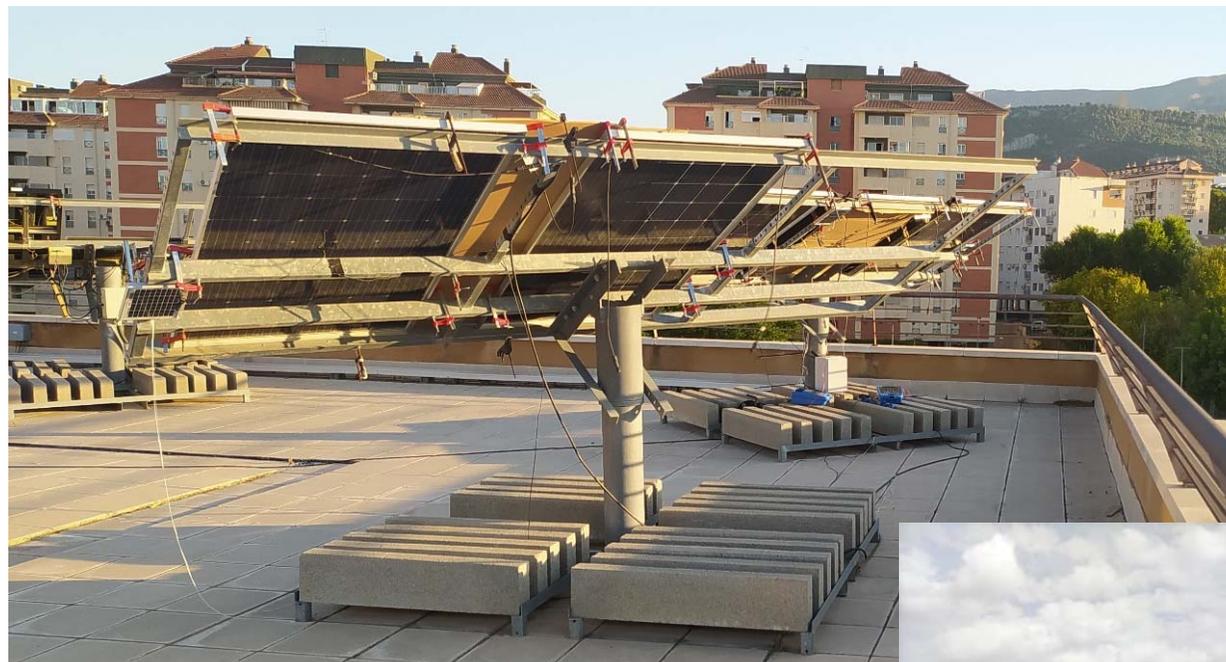
Other PV
Integration
Solutions





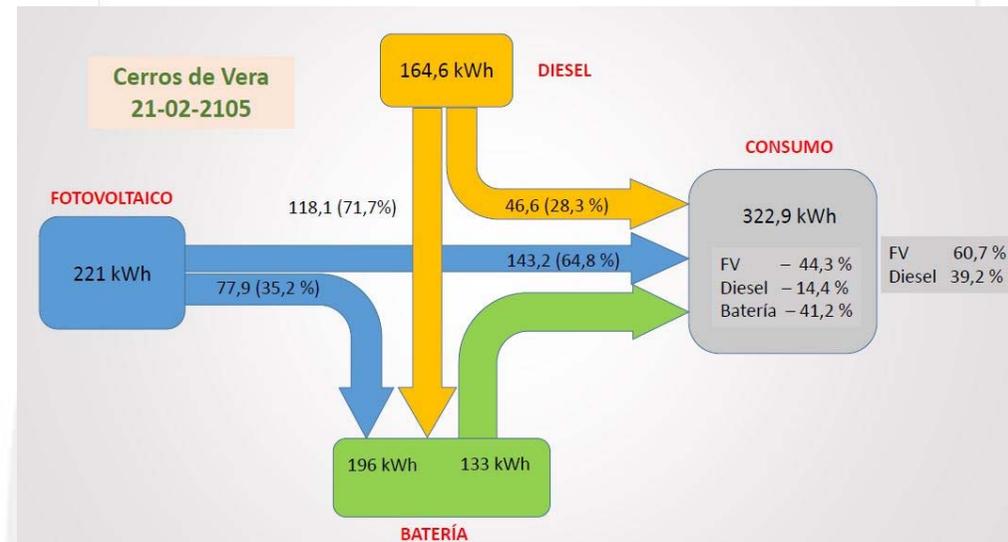
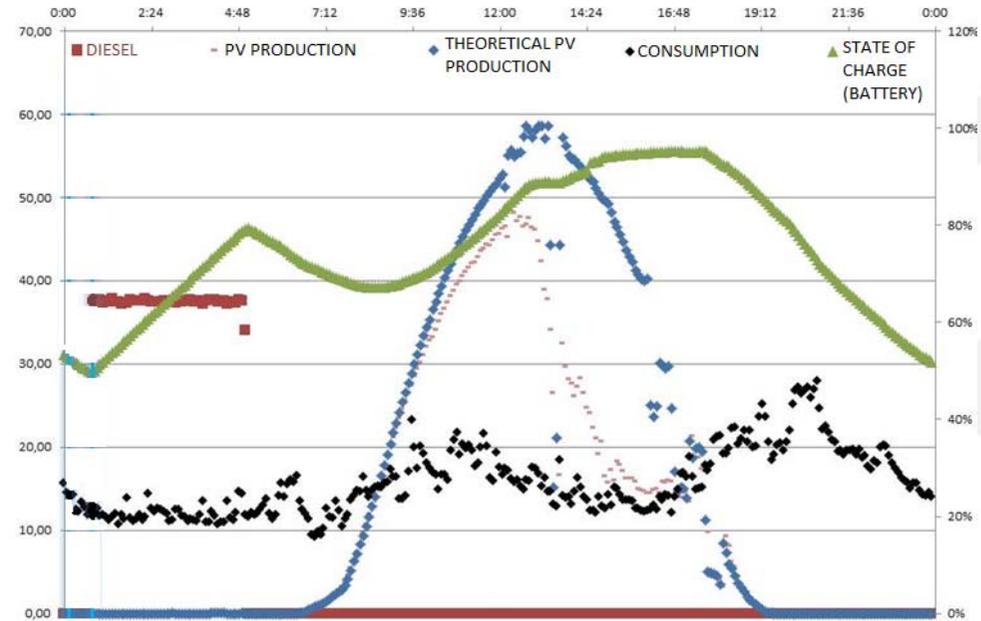
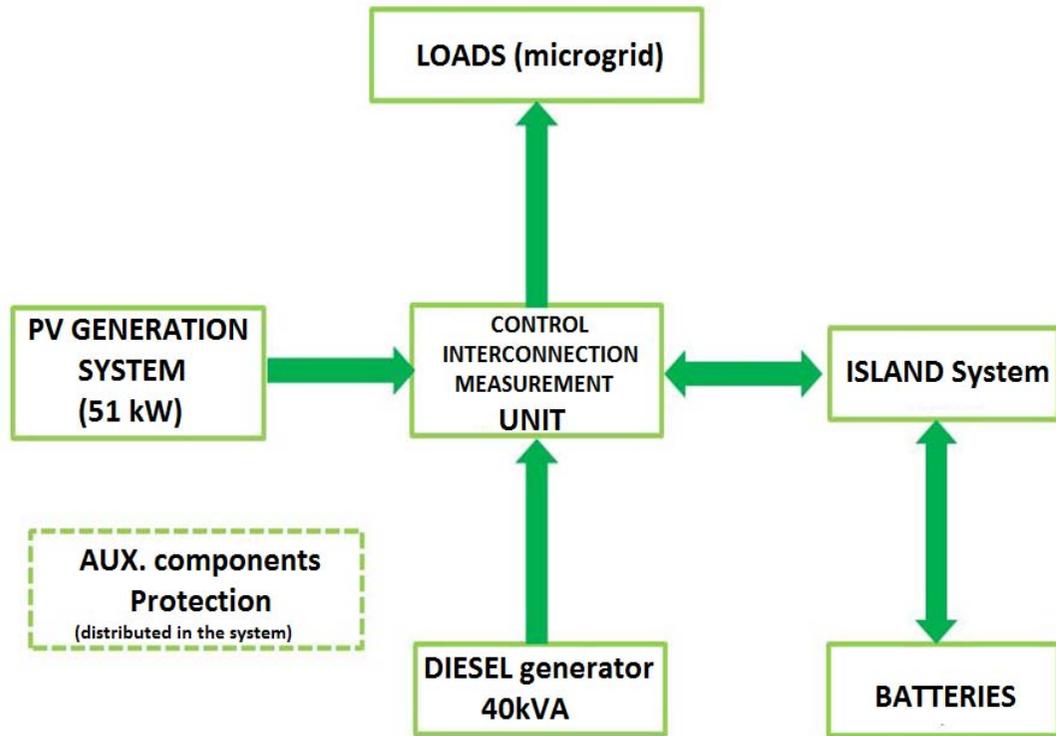
PV Projects/Solutions

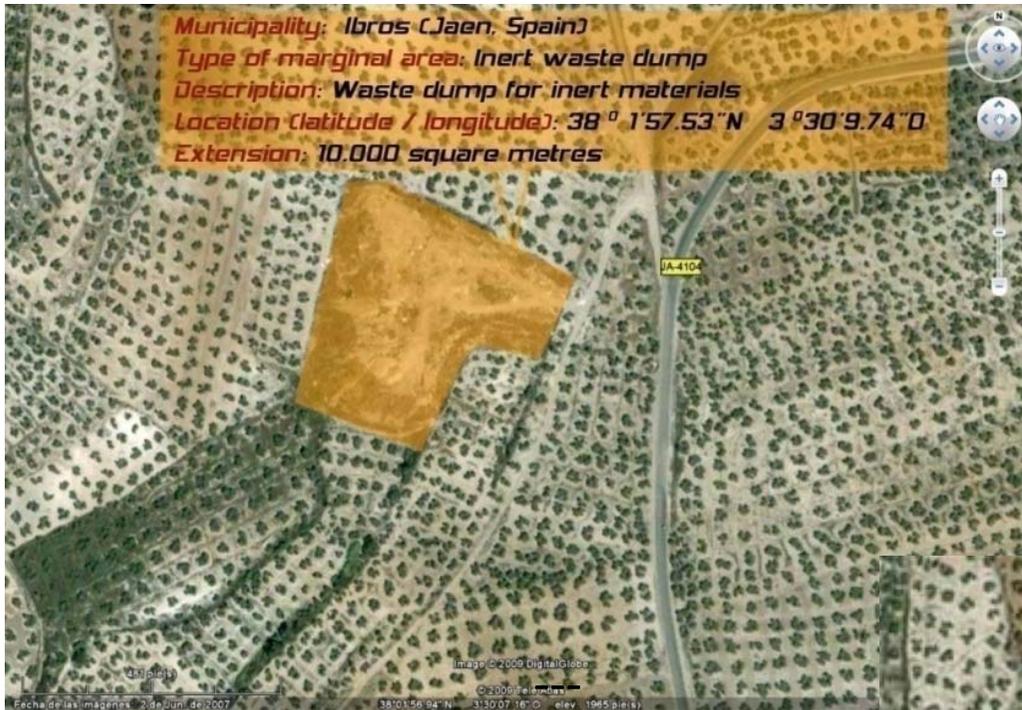
Bifacial PV



PV Projects/Solutions

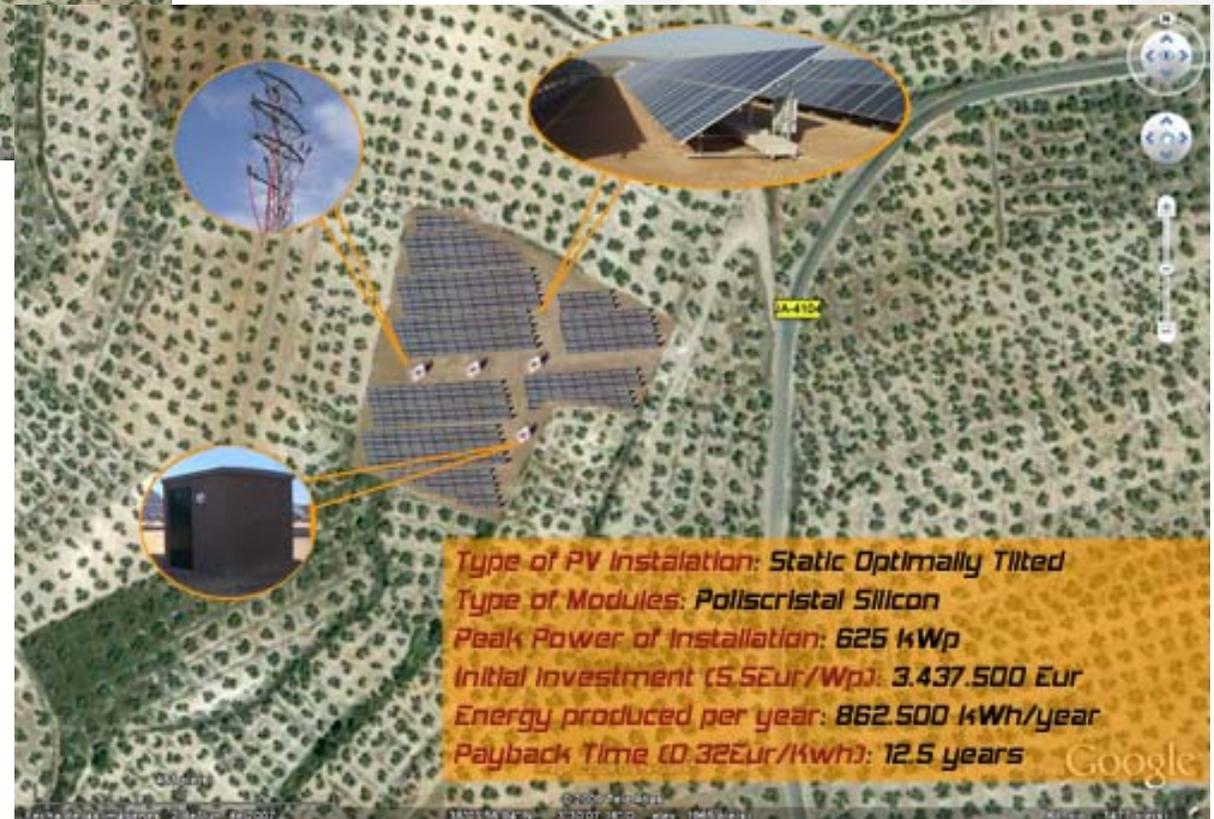
Microgrids





PV Land Positive Solutions

PV at Marginal Lands



PV Projects/Solutions

Rural Electrification

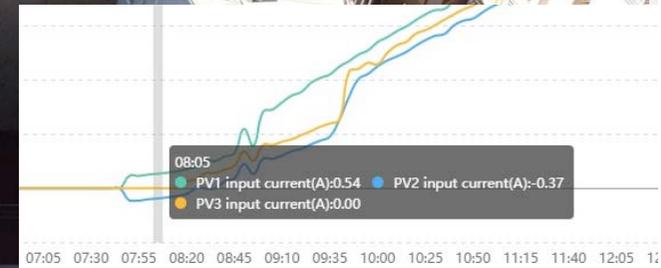
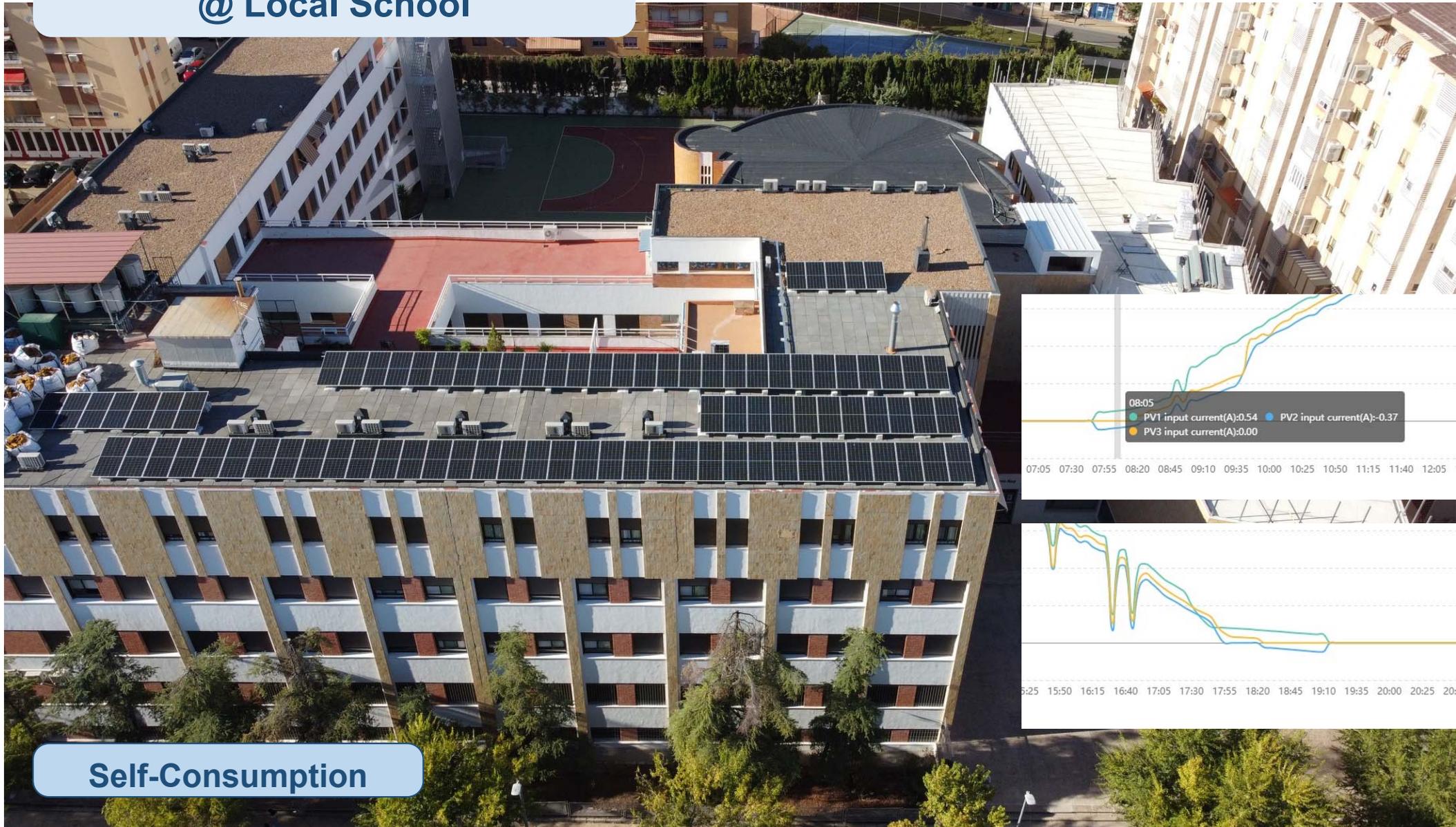


Consulting Services

PV
Engineering
Design



Teaching Innovation Project
@ Local School

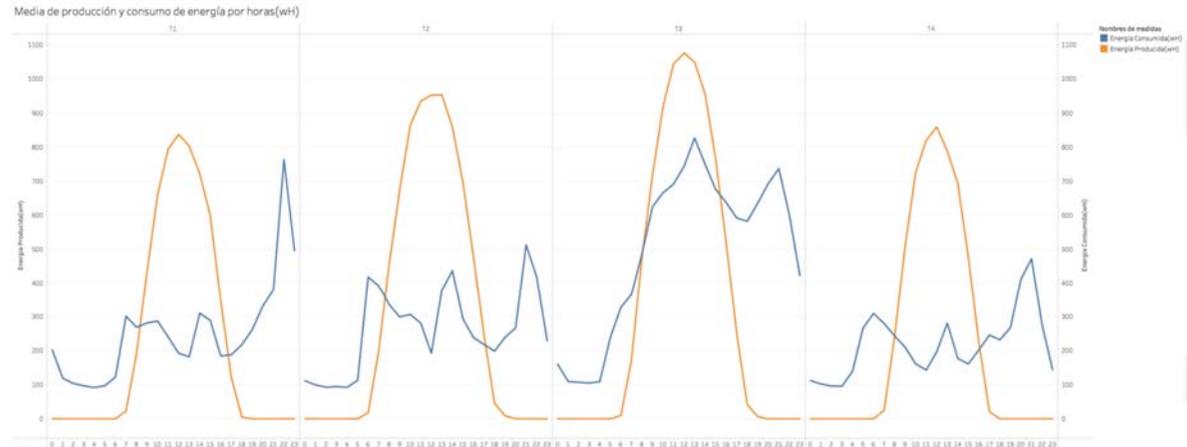
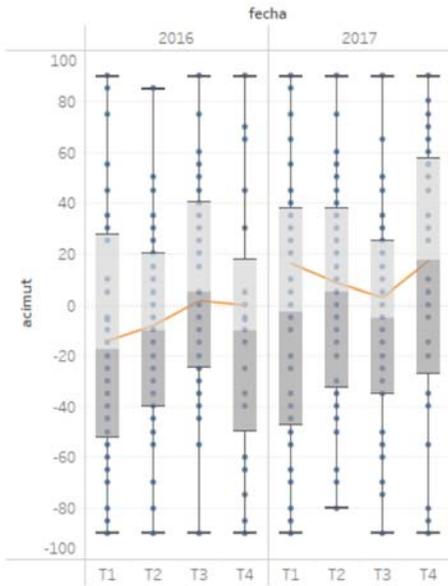


Self-Consumption

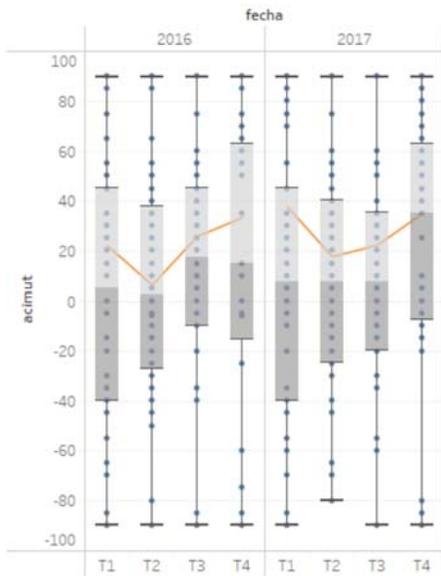
PV Self-Consumption Optimisation

PV team + Data Mining Team

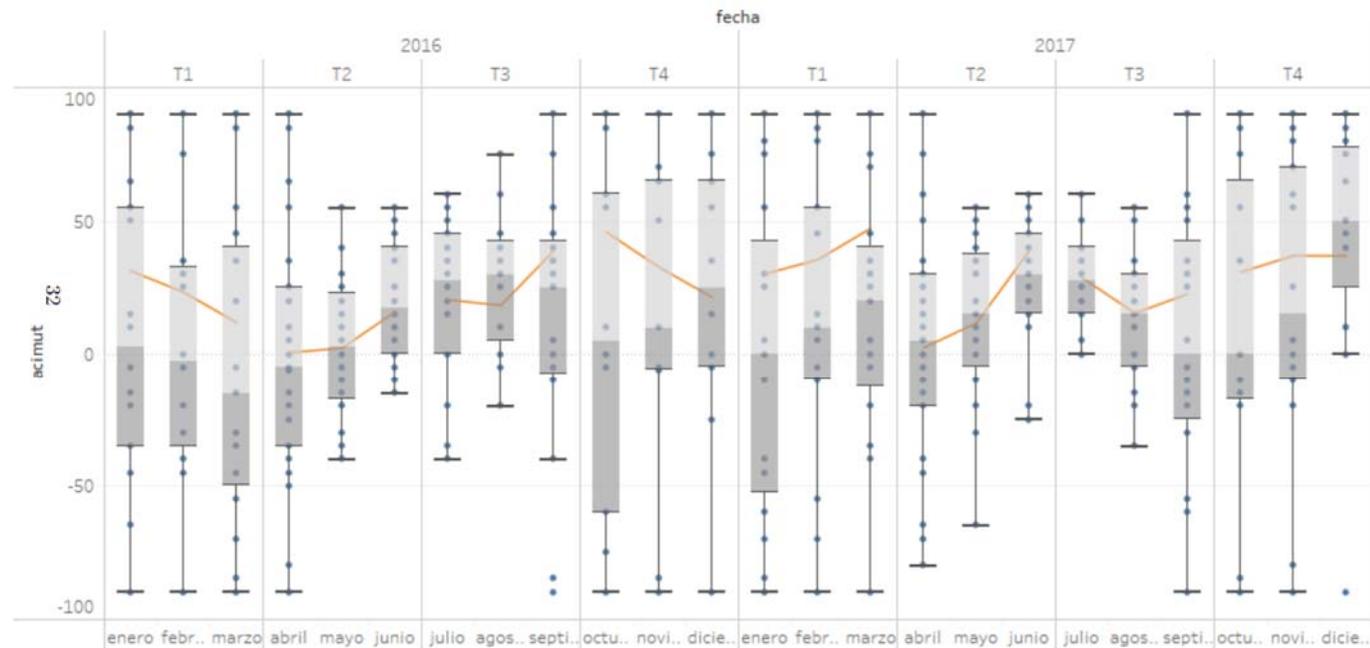
Acimut - ta.



Acimut - tha.

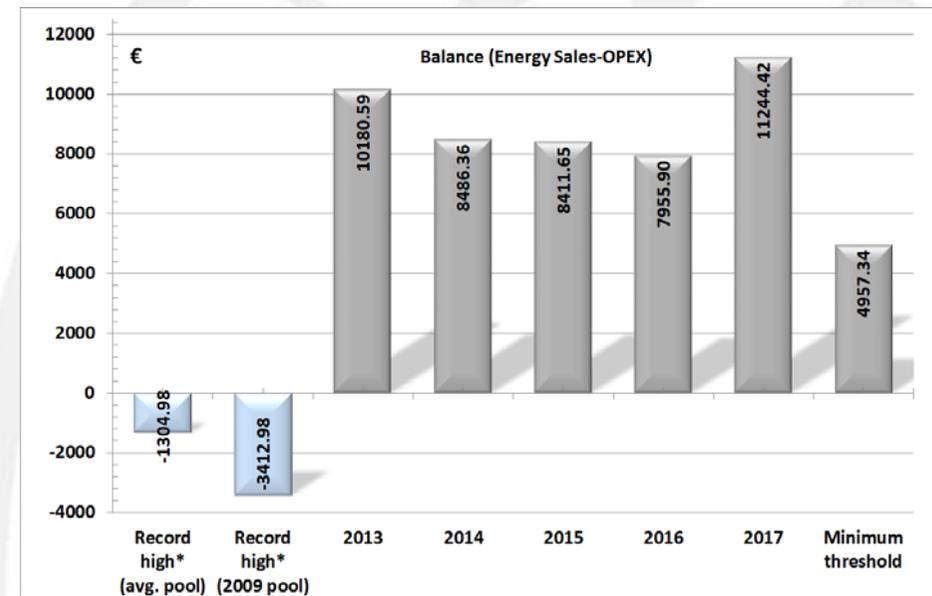
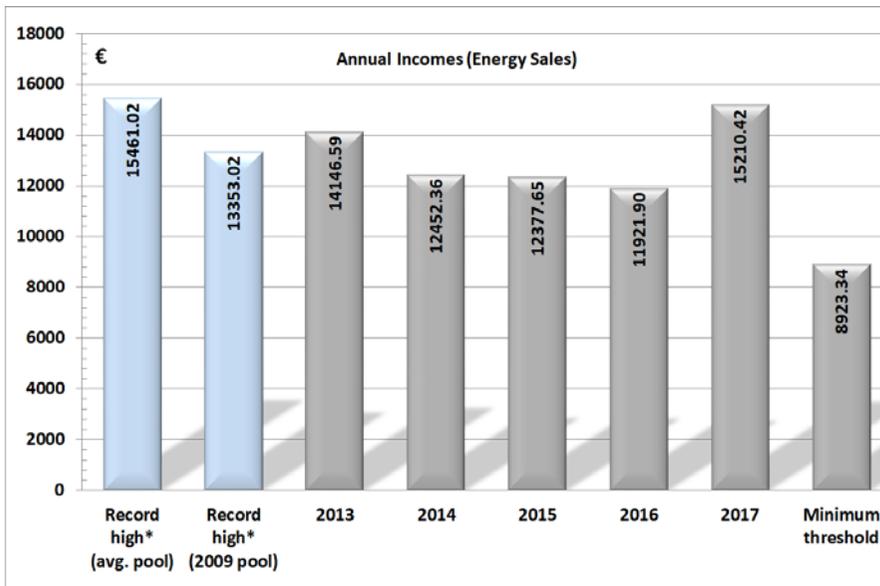
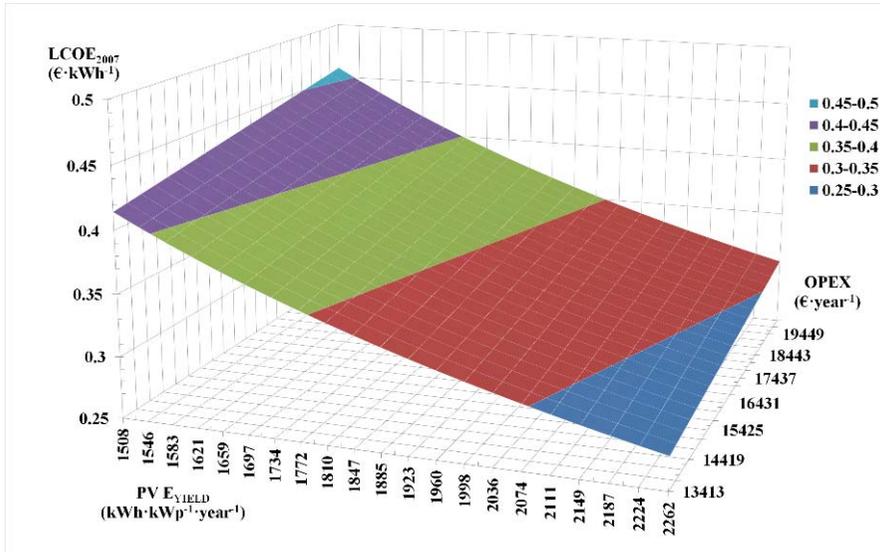


Acimut - tha.



Planning + Solar Economy

Influence of National Regulations in the PV O&M tasks and feasibility of PV projects



International Testing Sites

→ Grid-connected PV System in Tacna (Perú)



→ Grid-connected Thin-Film System in Lima (Perú)



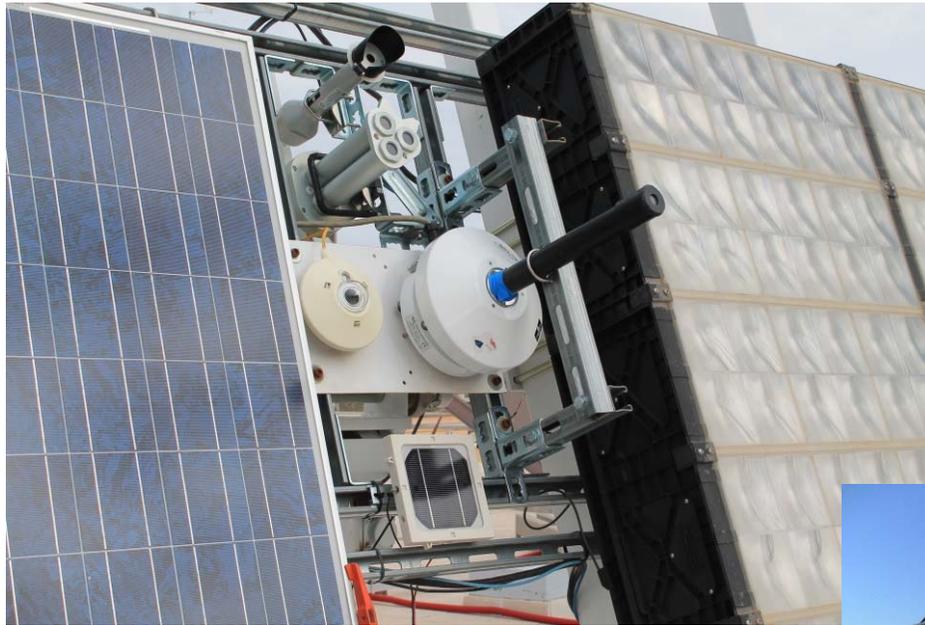
→ Grid-connected PV System in Lima (Perú)



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DEL PERÚ



→ Grid-connected PV System in Arequipa (Perú)



→ Meteorological Stations

- Pyrheliometers
- Spectral Band Pyrheliometer
- Pyranometers (Global Horizontal, Global Tilted and Diffuse)
- Spectroradiometers
- Ambient Temperature, Wind, Humidity and Pressure





→ Sun-trackers

- Long-term outdoor monitoring
- Angular losses and shading studies
- Characterization of different technologies



→ Fixed-Structures

- Characterization of different technologies
- Ageing degradation



Labs and Equipment

Field Measurement Equipment



- Power Quality and Energy Analyzer
- Wattmeter (3-phase)
- Earth Ground Tester
- Insulation Tester



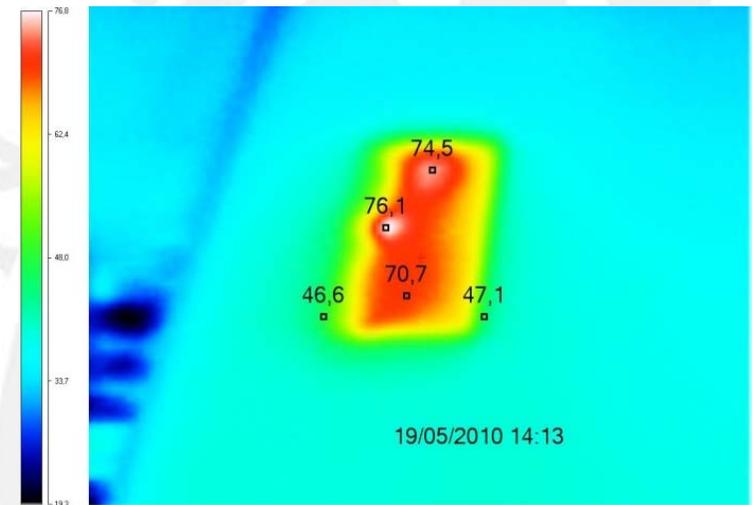


- Portable Commercial PV Analyzers I-V curve tracers (Electronic load)

- Portable PV Analyzers I-V curve tracers (Capacitive load) → On demand designs

Labs and Equipment

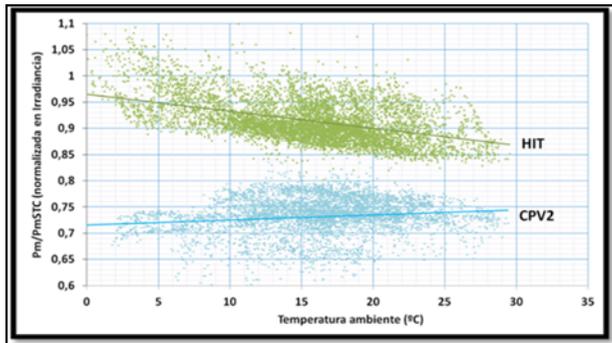
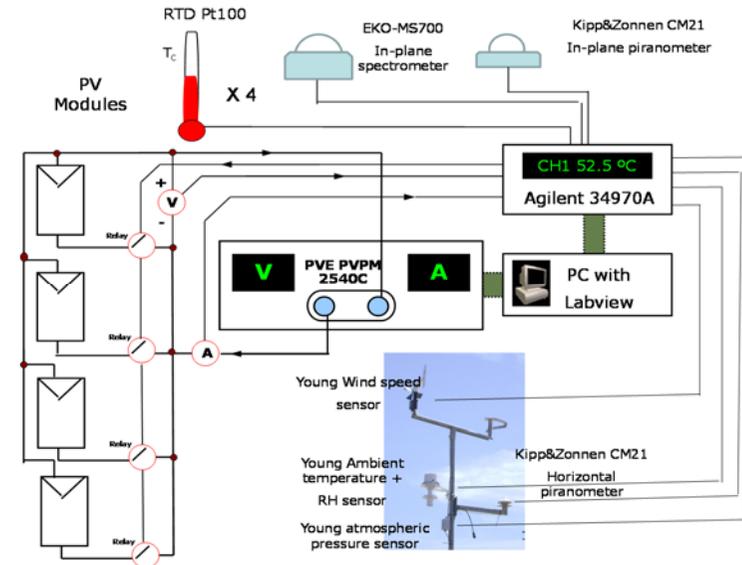
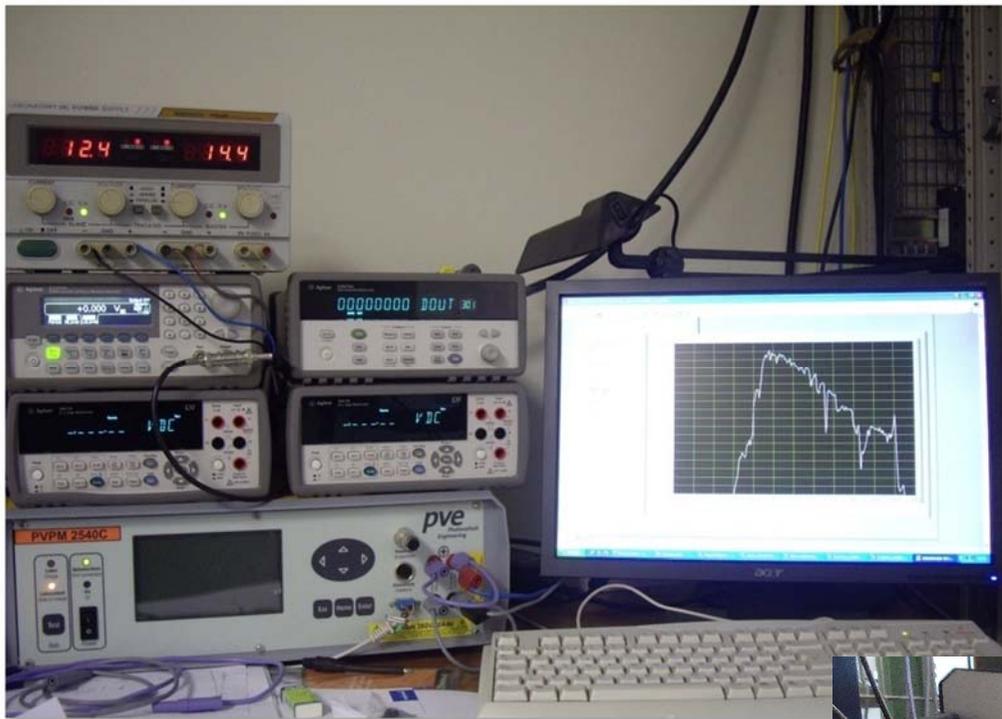
Field Measurement Equipment



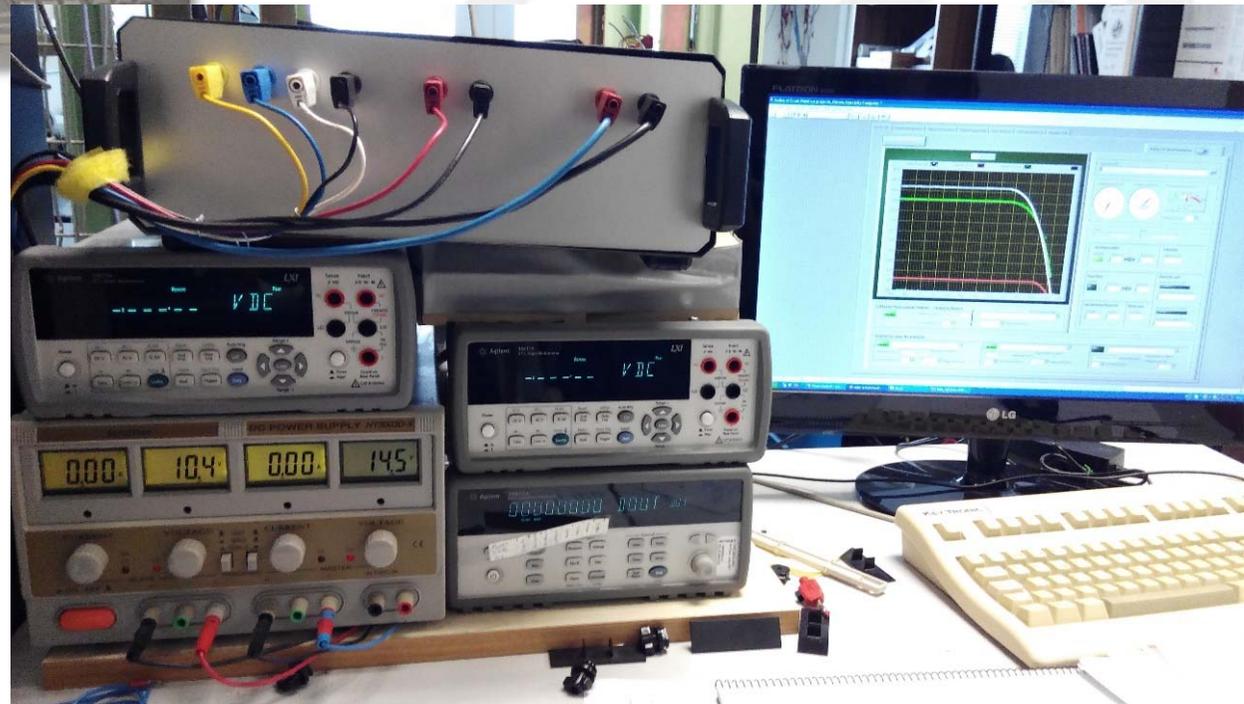
- Thermal Cameras
- Dataloggers
- *Ad hoc* monitoring systems

Labs and Equipment

Field Measurement Equipment



- I-V curve automatic measurement procedure





- **Characterization of stand-alone PV systems and batteries**
- **Characterization of micro-inverters**

TRAINING



A word cloud graphic where the word 'TRAINING' is the largest and most prominent. Other words are arranged around it in various sizes and orientations, including:

- EDUCATION
- GOAL
- SKILLS
- KNOWLEDGE
- PERSONAL
- CAPABILITY
- PRACTICAL
- SCHOOL
- FEEDBACK
- CONTENT
- IMPROVEMENT
- COMPETENCIES
- RESULT
- TEACHING
- PROFESSIONAL
- DEVELOPMENT
- SPECIFIC
- ACQUISITION
- QUALIFICATION
- CAPACITY
- JOB
- PERFORMANCE
- VOCATIONAL
- SOFTWARE

Online and onsite Master Degree courses

- Master in Renewable Energies
- **Master in Technology of Solar Photovoltaic Systems (online)**



Training Courses (on demand)



National Engineering University (Lima, Peru)



Lublin University of Technology (Poland)

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MORE INFO:

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