

TRAINING ACTIVITIES

Objectives

As part of the CACTUS Final Event, a technical visit to the Plataforma Solar de Almería (PSA), operated by CIEMAT, was organised for CACTUS partners and invited experts. This visit served as a key training activity under Work Package 4 (WP4), aiming to increase awareness of the capabilities of large-scale solar research infrastructures and foster collaboration between European and Latin American institutions in the field of solar energy.

A group of 12 participants travelled from the University of Granada to the PSA facilities, where they were welcomed by PSA researchers and technical staff.

The specific objectives are:

- To gain first-hand insight into one of the largest and most advanced solar research infrastructures in Europe.
- To explore experimental facilities and research platforms relevant for CACTUS, including soiling studies, solar tower systems, and component testing.
- To identify potential collaboration opportunities between CACTUS partners and PSA, particularly in the context of O&M, testing protocols, and technology transfer.

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Fig. 1 Visitors to the PSA posing in front of part of the photovoltaic module testing facilities.



Fig. 2 Image taken from the top of the PSA's CESA-1 tower, showing part of the heliostat field.



Fig. 3 Inmaculada Cañadas (PSA-CIEMAT) explaining the facilities and how the solar oven works to visitors.



Fig. 4 Stefan Wilbert explicando la instrumentación disponible para la medida de recurso solar y parámetros atmosféricos de interés para el banco de pruebas de tecnologías fotovoltaicas

Results

- Guided tour through several experimental platforms:
 - CESA-1 Solar Tower: A subgroup, including WP leaders and invited experts, accessed the top of the tower.
 - HTF loop and heliostat fields: Introduction to thermal storage and solar field operation.
 - PV test benches (CIEAMT and DLR): Overview of experimental setups related to PV module testing, soiling experiments, and long-term monitoring.
 - Aging and material degradation laboratory
- Discussions on measurement protocols, O&M challenges, and soiling mitigation under high-irradiance desert conditions.
- Exposure of Latin American researchers to European RI operational models and safety requirements.
- Positive feedback from participants, particularly regarding the tour of the CESA-1 solar tower, a symbolic and strategic research facility.

Training Activity	Visit to Plataforma Solar de Almería (PSA)
Date	5 th November 2025
Number of attendees	12
Place and country	Tabernas , Almería, Spain
Consortium Partners involved	UGR-EU-SOLARIS, CEA-INES, EURAC, ATAMOSTEC, UNC
Additional Notes	N/A



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