



STAGE-STE PROJECT Presentation of CTAER (partner 11)

***Scientific and Technological Alliance
for Guaranteeing the European
Excellence in Concentrating Solar
Thermal Energy***

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STAGE-STE Consortium

Participant no.	Organisation name	Country
1 (Coord.)	CIEMAT	SPAIN
2	DLR	GERMANY
3	PSI	SWITZERLAND
4	CNRS	FRANCE
5	FISE	GERMANY
6	ENEA	ITALY
7	ETHZ	SWITZERLAND
8	CEA	FRANCE
9	CYI	CYPRUS
10	LNEG	PORTUGAL
11	CTAER	SPAIN
12	CNR	ITALY
13	CENER	SPAIN
14	TECN	SPAIN
15	UEVORA	PORTUGAL
16	IMDEA	SPAIN
17	CRAN	UK
18	TKN	SPAIN
19	UNIPA	ITALY
20	CRS4	ITALY

Participant no.	Organisation name	Country
21	INESC-ID	PORTUGAL
22	IST-ID	PORTUGAL
23	SENER	SPAIN
24	AREVA	FRANCE
25	HITIT	TURKEY
26	ACCIONA	SPAIN
27	SCHOTT	GERMANY
28	ASE	ITALY
29	ESTELA	BELGIUM
30	ASNT	SPAIN
31	KSU	SAUDI ARABIA
32	UNAM	MEXICO
33	SUN	SOUTH AFRICA
34	CSERS	LYBIA
35	CSIRO	AUSTRALIA
36	FUSP	BRAZIL
37	IIEECAS	CHINA
38	UDC	CHILE
39	UCAM	MOROCCO
40	FBK	SPAIN

What is CTAER?

CTAER is an **Advanced Technology Centre for Renewable Energies**, which aims to contribute to the development of technologies for the exploitation of renewable energies.

CTAER is a **private foundation**, with a Board of Trustees comprised of **public and private entities**.

Mission:

To contribute to a greater use of renewable energy through research, technology development, transfer, innovation, dissemination and training, in proper and others projects, promoting the improvement of the competitiveness of the enterprises and the social and environmental benefits associated with the use of these energy sources.

Vision:

To become an essential and dynamic element of the “science, technological and business system” in Andalusia, Spain and Europe, allowing us to be the international forefront in innovation, technological development and the training field on renewable energies

CTAER's main activities

CTAER's **projects** aim primarily at research applied to renewable energy technologies and resources. Its main effort is to improve performance and reduce costs in technologies related to solar, biomass and wind and marine renewable energies sources.

Main activities:

R&D projects

Stage by stage, from the idea to technological development

Research Infrastructures

Construction or improvement of technological equipment for research development

Research and Patents

Elaboration of studies in the field of technological monitoring study and patent process management

Training

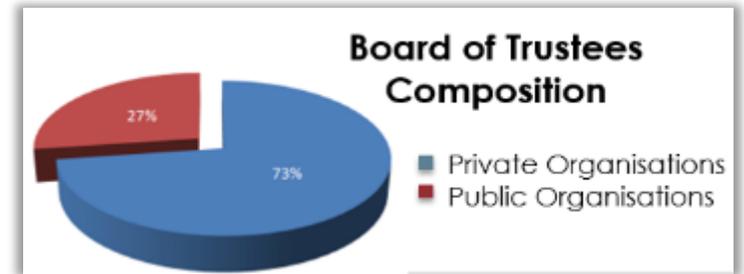
Organisation of specialised courses

Services

Multiple services to third parties: from physicochemical tests to technological assistance for companies

CTAER's Board of Trustees

Comprised of the leading Spanish companies in the Renewable Energies industry, Universities as well as the National Government Research Centre for Energy, Environment and Technology (CIEMAT).



Public Entities



Fundación Real Andalucía Empresa
CONSEJERÍA DE INNOVACIÓN, CIENCIA Y EMPRESA



Agencia de Innovación y Desarrollo de Andalucía IDEA
CONSEJERÍA DE INNOVACIÓN, CIENCIA Y EMPRESA



CIEMAT Centro Nacional de Investigaciones Científicas
Departamento de Energía, Petroleros y Tecnología

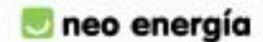
Universities



UNIVERSIDAD DE JAÉN



Companies



Where is CTAER?



Entity located in Andalusia, SPAIN



3 work areas:

- **Solar:** in the desert of Tabernas (Almeria)
- **Biomass:** in the region of the Alto Guadalquivir (in the municipality of Mengibar-Jaen, within the *Science and Technology Park of Oil and Olive Grove, GEOLIT*)
- **Wind_and marine energy:** expected to be on the Andalusian Atlantic seaboard.

CTAER's Solar Energy Test Facilities



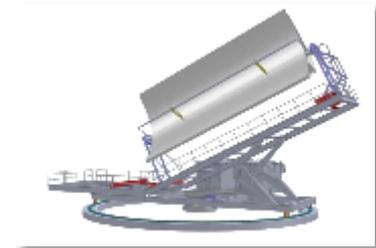
100 ha in Tabernas, Almería



Variable geometry solar test facilities for central receiver systems



Variable geometry solar test facilities for parabolic trough system



CTAER's Biomass Energy Test Facilities



The biomass department is located in Mengibar-Jaen, within the Science and Technology Park GEOLIT, where it has its own building with both physico-chemical and biomass energy characterisation laboratories, and the boiler test bench; among other facilities and work areas.



Role in the STAGE-STE project

CTAER will participate in the following WPs:

- **WP2** “Integrating Activities to Lay the Foundations for Long-lasting Research Cooperation” (5 pm)
- **WP3** “Enhancement of STE Research Facilities Cooperation”, as leader (33 pm)
- **WP4** “Capacity Building and Training Activities” (28 pm)
- **WP5** “Relationship with Industry & Transfer of Knowledge Activities” (13 pm)
- **WP6** “International Cooperation Activities” (7 pm)
- **WP12** “Point Focusing STE Technologies” (63 pm)

References

COLLABORATOR / PROMOTOR

PROJECT

DESCRIPTION

ABENGOA SOLAR

Captorsol

Improved tower power plant design



Hibridación Solar-Biomasa

New industrial power plant model study



BIOSTIRLING-4SKA

Pilot hybrid parabolic dish for the SKA telescope



Constitution of the European distributed concentrating solar technologies research management infrastructure



International Seminar on Solar Thermal Power

Engineers and scientists in the Mediterranean Region (north and south) acquired technical knowledge for carrying out solar thermal power development plans in their home countries.

References

COLLABORATOR / PROMOTOR

PROJECT

DESCRIPTION

ABENGOA

BIO-SOS I,II

Collaboration in research on biodiesel production from cultivated microorganisms (especially algae).

ABENGOA SOLAR

CRS-SALES

Analysis of optimal heliostat field and tower geometries based on latitude and the solar resource, control of measurement of power incident on a salt receiver, and analysis of recovery procedures after an event in which the working fluid freezes.



International Seminar on Solar Thermal Power
Higher School of Engineering,
Seville, Nov. 2012

Engineers and scientists in the Mediterranean Region (north and south) acquired technical knowledge for carrying out solar thermal power development plans in their home countries.



PLANT OPERATOR
COURSE
200 hours. May-Nov. 2012

Students acquired the competence necessary for operating of solar thermal power plants: functioning, startup, supervisory tasks, operation and maintenance.



Technology Surveillance
Report on the Solar Thermal
Power Sector 2010-2011.

Directory of the agents active in the sector, guide to legislation, agenda of activities. List of resources and the most important announcements. Analysis of these technology elements.



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A N D A L U C I A

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