

Press release

State-of-the-art heliostats to reduce the cost of solar power

- ▶▶ *The IK4-TEKNIKER and CENER technology centres are collaborating in the design of EASY, an innovative reflector concept that stands out because of its small size*
- ▶▶ *This mass-produced device will allow solar field costs to be cut down to 100 \$/m²*
- ▶▶ *It will be presented at SolarPACES, the leading world-level event in terms of solar power concentration*

(Eibar, Basque Country. 26 September, 2017).- There are, nowadays, several kinds of thermoelectric solar power plant systems struggling to become leaders in the solar power market. The priority of companies operating in this sector is focused on minimising costs associated with the elements used to harness the energy supplied by the sun more efficiently.

It is in this context that [CENER \(that National Centre for Renewables\)](#) and [IK4-TEKNIKER](#) have joined forces to develop an innovative concept for a heliostat type solar reflector known as EASY (hEliostas for eAsy and Smart deploYment), a small device by means of which they expect to reduce solar field costs down to 100 \$/m².

The device features an innovative tracking system actuated by low-cost motors. This development is equipped with a mechanical transmission based on cables that delivers backlash-free operation at an extremely low cost and results in a very high degree of accuracy in the positioning of the heliostat at a lower cost.

The system is much more precise compared to others currently in use as it minimises structural deformations produced by the wind and eliminates mirror edging errors.

The first developments have already been tested at the facilities of the solar platform in Almería, thus making it possible to validate the system according to the requirements established for this purpose.

To be presented at SolarPACES

IK4-TEKNIKER will present this innovative device at [SolarPACES](#), the leading world event on solar power and chemical power systems to be held in Santiago de Chile from September 26 - 29.

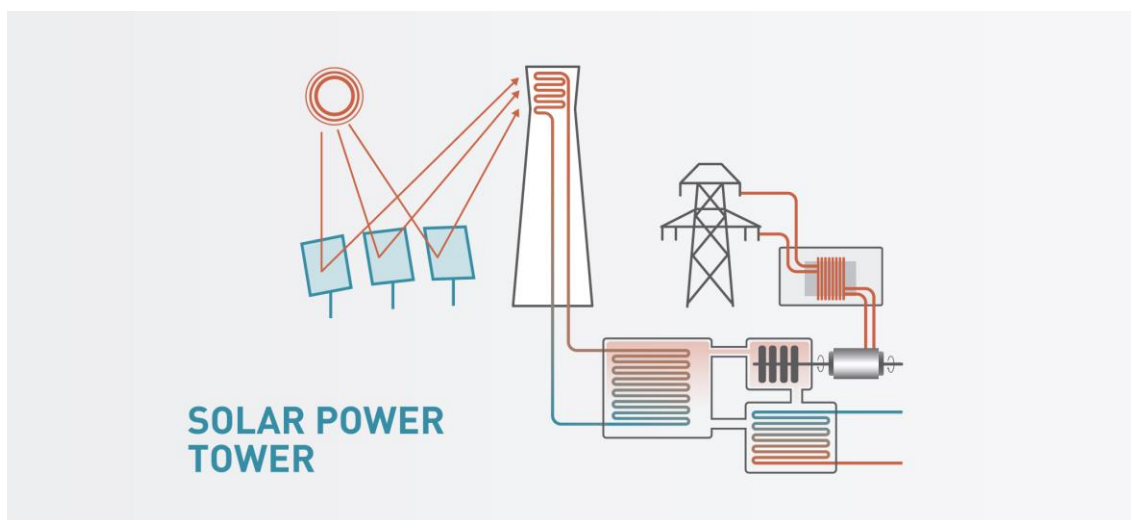
During this event, the technology centre will give four presentations describing, in addition to heliostat systems, other solutions developed in this field such as an innovative cleaning system for heliostats and a new format of anti-fouling solar coatings.

The conference, organised by the [International Energy Agency \(IEA\)](#) will bring together more than 600 researchers, scientists and businessmen from all over the world to discuss the recent developments reported in the field of energy.

A promising future for tower power stations

Among the alternatives currently offered by the thermoelectric sector, most experts believe that tower power plants are one step ahead in the struggle to achieve a sizeable share of the market over the next few years.

Compared to other systems such as cylinder-parabolic collectors (CCP) or Fresnel collectors, towers can achieve higher concentration ratios and, consequently, higher temperatures. The end result is a more competitive storage device as the cost per unit of energy stored is lower.



The thermal circuit and receptor, moreover, are no longer distributed throughout the solar field, but confined to the tower. This does not only drastically downsize this critical part but also reduces costs, thermal losses and operating risks arising from fluids carrying heat when they freeze.

In most cases, molten salt fluids are used as means of storage and transportation in these tower systems. Contrary to what applies to other configurations, it is unnecessary to use an additional exchanger. Consequently, this reduces thermal losses, provides a more simple plant layout and reduces costs. En la actualidad, existen varios tipos de plantas solares termoeléctricas en constante puja por liderar el mercado de la energía solar y, en esta carrera, el objetivo prioritario de las empresas del sector se centra en minimizar los costes de los elementos empleados para el aprovechamiento de la energía que proviene del sol.

Concerning IK4-TEKNIKER

With more than 35 years of experience in applied technology research that has been transferred to companies, IK4-TEKNIKER has achieved a high degree of specialisation in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs). This means that its cutting edge know-how has been made available to customers to meet their requirements.

Further information

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