

## Industrial Solar, CSP Services and the German Aerospace Center (DLR) join efforts in Artificial Intelligence project AuSeSol

The AuSeSol project aims to integrate Artificial Intelligence in Solar Thermal Heating and Power Generation and introduce autonomous monitoring and operation. While solar technologies are already proven and applied, integrating artificial intelligence in the system's operation and monitoring offers substantial potential for autonomy and efficiency optimization. The project partners cooperate in a five-month project financed by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety to construct a technical proposal that provides the blueprint to the development stage in AuSeSol 2.

Concentrating solar thermal technologies contribute significantly in achieving a carbon neutral process heating and power generation. The operation of concentrating solar thermal collectors depends on comprehensive data collection and evaluation. Artificial Intelligence methods enable the system operator to perform condition monitoring by harnessing the Big Data from the installed sensors and applying deep learning methodologies to detect faults and apply proactive measures such as predictive preventive maintenance. Moreover, deep learning predictive models allow the operation control algorithm to interactively react to the system's conditions and teach itself the most optimal approaches. As a result, the operations' inefficiencies and uncertainties will be reduced which leads to bigger energy yields, more reliability and availability, and less human errors.

The [German Aerospace Center \(Deutsches Zentrum für Luft- und Raumfahrt; DLR\)](#) is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport, security, and digitalisation is integrated into national and international cooperative ventures.

[CSP Services](#) is a private engineering and testing company founded in 2007 as spin-off of the German Aerospace Center (DLR). CSP Services counts on a team of more than 25 renowned experts and engineers in the field of solar power technologies and operates from two service centers in Cologne (Germany) and Almería (Spain) on solar projects worldwide.

Within the five-month project AuSeSol, the partners develop and evaluate different concepts with the objective to realize the most promising ones in a subsequent research and demonstration project. The AuSeSol project is financed by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety. Industrial Solar will receive support of about 32.000 € with a funding rate of 50%.

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Industrial Solar Holding Europe AB holds 100% of Industrial Solar GmbH and 100% of SolarSpring GmbH - both located in Freiburg/Germany. Industrial Solar GmbH is an international leading technology and solution provider, which develops projects mainly based on its innovative Fresnel collector technology suitable for fulfilling an expected growing market of solar process heat. As a one-stop-shop Industrial Solar offers turnkey solutions for customers in several industries.

Find out more about Industrial Solar GmbH at the following address:

<https://www.industrial-solar.de/>

Founded in 2009 as a spin-off of the Fraunhofer ISE, SolarSpring GmbH - membrane solutions, has evolved into an international pioneer in the field of membrane distillation offering innovative waste- and drinking water treatment technology.

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