

## EU GREEN WEEK PARTNER EVENT – 4<sup>TH</sup> JUNE 2021

### Concentrated solar power (CSP) and sCO<sub>2</sub> – perfect match towards a zero-pollution future

**Date:** 4<sup>th</sup> June

**Time:** 10:30 – 12:00 CET

**Venue:** Online seminar

#### **Event description:**

Concentrated solar power (CSP) and supercritical carbon dioxide (sCO<sub>2</sub>) will be the perfect match for decarbonising the energy system towards a zero-pollution future.

#### *CSP, a 100% green solar energy with zero emission*

CSP technologies use mirrors to concentrate the sun's heat onto a receiver to generate electricity by converting solar thermal energy from sunlight to drive traditional steam turbines or engines. CSP plant's built-in thermal energy storage system is able to continue generating electricity at night and has the ability to replace conventional power plants with 24/7 clean electricity. CSP electricity generation produces no carbon dioxide nor other heat-trapping gases that contribute to climate change, nor other harmful emissions or wastes associated with coal power.

#### *sCO<sub>2</sub>, an efficient way to reduce emission*

What is sCO<sub>2</sub>? sCO<sub>2</sub> is a fluid state of carbon dioxide where it is heated and held at or above its critical temperature and pressure. This phase of CO<sub>2</sub> is commonly used as a solvent in chemical extraction processes due to its high solubility, low toxicity and minimal net effect on the environment. In recent years, supercritical CO<sub>2</sub> cycles can be configured to accommodate the temperature and pressure characteristics of various heat sources, providing superior efficiency in converting heat to electrical power. This process reduces atmospheric emissions to zero. Therefore, sCO<sub>2</sub> could be the perfect match for CSP in new power plant designs to increase efficiency while cutting costs, and at the same time achieving the goals of decarbonation and combating the climate change.

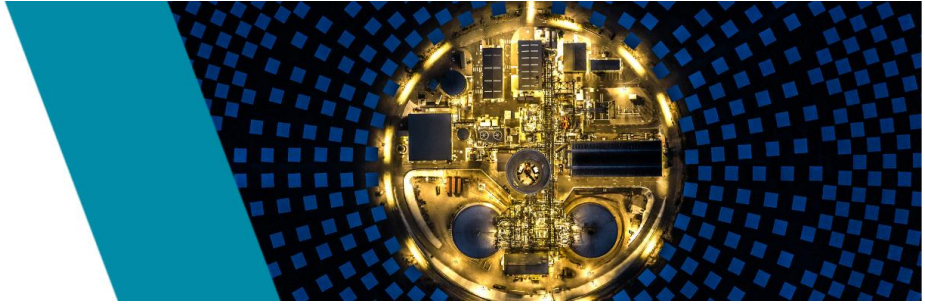
SOLARSCO2OL is a Horizon2020 funded project aiming at unlocking the potential of integrating sCO<sub>2</sub> power block in all kinds of CSP plants. A short webinar (1 hour) will be hosted by SOLARSCO2OL partners to present the project concept and how sCO<sub>2</sub> can be used in CSP power plant to archive the decarbonisation of energy system.

Consortium key partners from both sCO<sub>2</sub> turbomachinery and CSP sectors will present their R&D activities and how they consider SOLARSCO2OL Strategic to achieve their objective and CSP vision.



The project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 952953.

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## Programme:

Time	Item
10:30	Welcome // Opening (ESTELA)
<b>Part I</b>	
10:35 – 10:50	SOLARSCO2OL Introduction (RINA-C/KTH)
10:50 – 11:00	Presentation of La Africana Demosite (MAGTEL)
11:00 – 11:10	sCO2 compressor presentation (Baker Hughes)
11:10 – 11:20	sCO2 turbine presentation (Franco Tosi Meccanica)
11:20 – 11:30	HEXs presentation (LOINTEK)
11:30 – 11:40	Electric heater presentation (SEICO)
11:40 – 11:50	Why sCO2 could be relevant for CSP Sector (Abengoa)
<b>Part II</b>	
11:50 – 12:00	Q&A session

## Sign up to the event:

<https://www.solarsco2ol.eu/event/eu-green-week-partner-event-concentrated-solar-power-csp-and-sco2-perfect-match-towards-a-zero-pollution-future/>

Learn more about SOLARSCO2OL project: [www.solarsco2ol.eu](http://www.solarsco2ol.eu)



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