

ContainerPower Energy Solutions

Sophia solar power generation panels



Overview

What is Sophia & how does it work?

SOPHIA is an EU-funded Horizon Europe project that aims to implement advanced digital solutions in end-of-life solar panels, involving the full value chain in order to increase their current reuse, repair and recycling rates. The end goal is to foster a more circular, innovative and competitive Europe. The project will focus on:

What is Sophia Project?

"SOPHIA addresses to the problem of photovoltaic panels End of Life, their management and the society awareness on electronicwaste management. The project will implement several Advanced Digital Solutions, involving all actors in the value chain, in order to increase the reuse.

How will Sophia contribute to a sustainable photovoltaic industry?

It is expected that in the ecodesign practise fully sustainable PV industry. Additionally, SOPHIA will contribute to the generation of new markets around the photovoltaic sector across Europe. CORDIS classifies projects with EuroSciVoc, a multilingual taxonomy of fields of science, through a semi-automatic process based on NLP techniques.

How can Sophia improve the health of solar panels?

One of SOPHIA's great contributions is the creation of a prototype that allows analyzing the state of health (SoH) of solar panels Thanks to this system, it's possible to evaluate efficiency, detect dark areas or structural damage, and decide whether the panel should be repaired or recycled.

What is Sophia's Horizon Europe project?

The project partners of SOPHIA gathered on 26 June 2025 in Valencia (Spain) to kick-off this Horizon Europe project. Through the development of innovative solutions to boost PV panels circularity, SOPHIA will contribute to fostering a

more circular, innovative and competitive Europe.

What is the Sophia consortium?

The SOPHIA consortium is composed of 15 entities from nine European countries, including research, industry, and waste management: CIDETEC, Fraunhofer, Wilock, LHV, Sadako, Biosolar, Akumpt, Sisecam, Ferrog, IS, Recyclia, EuRIC, CEPS, and ENCO, coordinated by AIMPLAS from Valencia. The project began in June 2025 and is expected to last 36 months.

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