

IREC helps Austrian company Sunplugged to implement pioneering solar photovoltaic technology and lower production costs

- **The Catalonia Institute for Energy Research (IREC) installs a new optical system in this company for the industrial inspection of the ‘roll-to-roll’ manufacturing processes of highly customizable flexible photovoltaic devices**
- **The installation of this equipment confirms the efficiency of the technology developed by IREC for the optical analysis of materials and devices, both in intermediate stages of production and in the final process**
- **The development of this monitoring tool has been carried out in the framework of the European Solar-Win project, led by the Institute**

Barcelona, December the 9th, 2021.- The Catalonia Institute for Energy Research (IREC) has completed the installation of a new optical system for the industrial inspection of the roll-to-roll manufacturing processes of flexible photovoltaic devices at the Austrian company Sunplugged, an innovative photovoltaic company.

The devices designed by Sunplugged are ‘new generation’ and have a high customizability in shape, aesthetics, electrical output, mechanical flexibility and lightness. These properties allow the technology to offer highly adaptable solutions for easy integration of photovoltaic systems in buildings, vehicles, furniture or farms.

In this way, the energy dependence of medium and small equipment and systems is reduced, the energy transfer and the decentralization of electrical energy production are favored. The aim of the company is, thanks to IREC’s tools, to apply photovoltaic energy in all sectors and reduce the cost of production.

The development and installation of this tool has demonstrated the efficiency of the technology developed by IREC in the optical analysis of materials and devices, both in intermediate stages of production, allowing the correction of the manufacturing processes, and in final stages, facilitating the optimization of the manufacturing of photovoltaic systems.

The Deputy Head of the Solar Energy Materials and Systems Group (SEMS) of IREC, Víctor Izquierdo, has assured that the integration of this tool in Sunplugged is “a key element for the overcoming the challenges of the photovoltaic industry in the implantation of new technologies that facilitate the ubiquitous installation of renewable energy” and that contribute to “a 15% reduction in the energy manufacturing costs and of scarce and high-value materials such as indium, silver or gallium”. According to Izquierdo, “at the same time, the efficiency of the adaptive photovoltaic systems is increased by 25%, which has a direct impact on reducing production costs and the payback of the investment”.

The development of this monitoring tool is part of the Solar-Win project, which has received an almost 2.5 million euros funding from the European Union. The project consortium is comprised by IREC, Acciona and two high-tech companies: Physee, a Dutch company

specialized in smart windows, and Sunplugged, a leading Austrian company in the development of customizable photovoltaic devices based on CIGS technology.

About IREC

The Fundació Institut de Recerca en Energia de Catalunya (IREC) is a public research center ascribed to the Department of Climate Action, Food and Rural Agenda of the *Generalitat de Catalunya*, in which the Department of Research and Universities and the Catalan Energy Institute (ICAEN) also participate. IREC is a CERCA center and accredited as a TECNIO center. Created in 2008, it aims to contribute to the sustainable development of society and increase the competitiveness of industry in the energy sector. The center develops research of excellence in the medium and long term, innovation and the development of new technological products and the dissemination of relevant knowledge by the public.

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