Press release

A new digital marketplace facilitates the trading of surplus solar energy between self-consumers

- *The NEXUSFLEX R&D project has explored a model that would allow households and businesses with solar self-consumption systems to earn additional income from their surplus electricity, while enabling other consumers to access electricity at more competitive prices*
- *Nexus Energía, Bamboo Energy and IREC have combined their expertise to develop the digital platform and algorithms needed to manage these exchanges*
- *The consortium has assessed the technical and economic feasibility of the solution, as well as the regulatory conditions required for its future implementation.*

Barcelona, 19 November 2026. A consortium comprising Nexus Energía, Bamboo Energy and the Catalonia Institute for Energy Research (IREC) has developed and carried out a technological assessment of a digital marketplace model designed to facilitate the trading of surplus photovoltaic electricity between different types of consumers.

The model targets prosumers – households and businesses that generate electricity for their own consumption through solar installations and may produce surplus energy. The solution would enable them to earn additional income from the electricity they do not use, while allowing other consumers to access electricity at potentially more competitive prices.

The growing number of solar installations is increasing the amount of electricity generated that is not always consumed at the time of production and therefore lost. To make better use of this surplus, the consortium has been working on a digital marketplace that would facilitate the exchange of photovoltaic electricity between prosumers and other consumers.

As part of the NEXUSFLEX R&D project, the initiative proposes a new business model aimed at making it easier for consumers to participate in energy trading beyond traditional electricity markets. The goal is to create benefits for both parties: improving the returns prosumers receive for their surplus electricity and reducing purchasing costs for consumers.

Marc Pahissa, Director of Business Innovation, Data and Engineering at Nexus Energía, explains: "*We are committed to continuous innovation and renewable energy to create greater value for our customers*." He adds: "*Through this project, we aim to maximise the use of solar surpluses and offer new consumption alternatives, helping to move towards a more flexible, efficient and participatory energy system*."

As part of the development, Bamboo Energy has worked on integrating the digital platform with Nexus Energía's systems, while IREC has designed and validated the mathematical optimisation algorithms that allocate available energy to consumers who need it. These models take into account solar generation forecasts and consumption

profiles, adjusting allocations to make the best possible use of the available surplus electricity.

Cristina Corchero, founder and CTO of Bamboo Energy, adds: "*Our platform makes it possible to exchange surplus solar electricity through financial compensation mechanisms that benefit both parties*."

In an illustrative scenario, with a price of €50/MWh for surplus electricity and a conventional purchasing cost of €100/MWh, an exchange price of €75/MWh would generate a shared benefit of €25/MWh for both the prosumer and the consumer. This is a theoretical simulation, and actual results would depend on the conditions of each transaction.

Gabriela Benveniste, Head of the Energy Economics Research Group at IREC, highlights: "*The algorithm we have developed is key to making this model possible, as it connects energy supply and demand while optimising exchanges between users*."

One of the main challenges in bringing this proposal to market is the regulatory framework. Current regulations establish specific conditions for self-consumption and the compensation of surplus electricity. It is therefore necessary to explore how this direct exchange model between users could be implemented and what requirements it would need to meet in practice.

Through NEXUSFLEX R&D, funded under the New Business Models call of the Spanish Institute for the Diversification and Saving of Energy (IDAE), the three organisations have made progress in assessing the technical and economic feasibility of this solution. The project has explored new ways of making better use of available renewable energy, reducing costs and supporting a more flexible and participatory energy system.

About the NEXUSFLEX R&D project

The NEXUSFLEX R&D project has been funded by the Instituto para la Diversificación y Ahorro de la Energía (IDAE) under the first call for grants for new business model projects in the energy transition (the 'Innovation in the Energy Transition' funding scheme). The funding comes from the European Union's NextGenerationEU programme, as part of the Spanish Government's Recovery, Transformation and Resilience Plan (PRTR).





About IREC

The Catalonia Institute for Energy Research (IREC) is a public research center ascribed to the Department of Territory, Housing and Ecological Transition of the *Generalitat de Catalunya*, in which the Department of Research and Universities also participates. 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 to 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 important knowledge and findings to the general public.

About Bamboo Energy

Bamboo Energy is a software company specialising in energy aggregation, multi-market optimisation and artificial intelligence applied to the management of distributed energy resources. Established in 2020 as a spin-off from the Catalonia Institute for Energy Research (IREC), the company builds on more than 15 years of research conducted by the Energy Systems Analytics (ESA) group. Bamboo Energy is a leading provider of SaaS solutions for aggregators, energy retailers, energy service companies and flexible consumers. It promotes a decentralised energy model based on the active participation of demand in energy markets. The company currently operates in Spain, France, Belgium, Portugal and Romania, while pursuing an expansion strategy into new European flexibility markets.

About Nexus Energía

Nexus Energía is an integrated energy company with an independent retail business, founded in 2000. It is a recognised player in the Spanish market for its electricity and gas supply activities, renewable energy producer representation, and energy efficiency and decarbonisation services. The company serves more than 54,000 supply points and represents over 16,500 generation plants, making it a leading player in the photovoltaic sector. Committed to a more sustainable, responsible and customer-focused energy model, Nexus Energía supplies households with certified 100% renewable green electricity and supports businesses with innovative solutions for self-consumption, energy efficiency and demand flexibility.

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