

**GENERA 2024**

<b>Fair:</b>	International Energy and Environment Fair
<b>Fechas de celebración:</b>	February 3rd to 6th, 2024
<b>Halls:</b>	Halls 9 and 10- IFEMA MADRID
<b>Opening times:</b>	From 10:00 to 19:00 h
<b>Frequency:</b>	Annual
<b>Character:</b>	Professional
<b>Edition:</b>	27th edition
<b>Exhibitors</b> ✓ <b>Nacional</b> ✓ <b>International</b> ✓	498 313 185
<b>Participating countries:</b>	<b>n. 24</b> Germany (DE) Austria (AT) Belgium (BE) Bosnia and Herzegovina (BA) Bulgaria (BG) China (CN) Cyprus (CY) Spain United States (US) France (FR) Israel (IL) Italy (IT) Lithuania (LT) Luxembourg (LU) Netherlands (NL) Poland (PL) Portugal (PT) Czech Republic (CZ) Singapore (SG) Sweden (SE) Switzerland (CH) Turkey (TR)

**Pablo Santos**  
 Jefe de Prensa GENERA  
 Tel.: +34 648 16 29 18  
 psantos@ifema.es

**Helena Valera**  
 Prensa Internacional  
 Tel.: +34 629 64 42 08  
 evalera@ifema.es

**Pilar Serrano**  
 Secretaria  
 Tel.: +34 648 18 92 18  
 pilars@ifema.es

<b>Parallel activities:</b>	Technical Sessions: Forum 9 – Forum 10 –Genera Solar Forum Innovation gallery
<b>Visitor profile:</b>	Professionals from consultancies, engineering, construction, trade - Industrial energy users - Manufacturers and distributors of equipment - Installers and maintenance companies - Promoters of energy projects - Universities and research centers - Specifiers and real estate developers - Public administrations, and in general, all professionals related to the world of energy efficiency and the environment
<b>Organized by:</b>	<b>IFEMA MADRID</b>
<b>Promoted by:</b>	<b>IDAE</b> , Institute for the Diversification and Saving of Energy. Ministry for the Ecological Transition and Demographic Challenge
<b>In collaboration with:</b>	A3e, Association of Energy Efficiency Companies ACOGEN, Spanish Association of Cogeneration AEE, Wind Business Association AEDIVE, Business Association for the Development and Promotion of Electric Mobility. AeH2, Spanish Hydrogen Association AELEC, Association of Electric Power Companies AEPIBAL, Business Association of Batteries, Batteries, and Energy Storage (SECARTYS) AMI, Association of Companies for Integral Maintenance and Energy Services ADHAC, Association of Companies for Heating and Cooling Networks ANESE, Association of Energy Services Companies AOP, Spanish Association of Petroleum Product Operators APPA, Renewables - Association of Renewable Energy Companies ASIT, Solar Thermal Industry Association ATECYR, Spanish Technical Association of Air Conditioning and Refrigeration CENER, National Center for Renewable Energies CIDE, Association of Electricity Distributors CIEMAT, Center for Energy, Environmental, and Technological Research COGEN ESPAÑA, Spanish Association for the Promotion of Cogeneration ENTRA, Association of Electric Agents and Companies and Energy Services

**Pablo Santos**  
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psantos@ifema.es

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Secretaría  
Tel.: +34 648 18 92 18  
pilars@ifema.es

	OECC, Spanish Office of Climate Change - Ministry for the Ecological Transition and the Demographic Challenge UNEF, Spanish Photovoltaic Union
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**More information:** <https://www.ifema.es/en/genera>

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Tel.: +34 648 16 29 18  
psantos@ifema.es

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Prensa Internacional  
Tel.: +34 629 64 42 08  
evalera@ifema.es

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Secretaría  
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pilars@ifema.es

### **27th edition of GENERA 2024 to have 24,000 m<sup>2</sup> net exhibition space.**

**The fair will be the professional showcase for innovative technologies and sustainable solutions from industry leaders, key organisations and associations, and emerging companies facing the new challenges of the sector as it moves towards a more sustainable future.**

**Madrid, 22 December 2023.- GENERA, the International Energy and Environment Fair, organised by IFEMA MADRID with the support of IDAE, will be held from 6 to 8 February at IFEMA MADRID. 100% of the exhibition space has already been allocated, with more than 400 live exhibitors who will occupy 24,000 m<sup>2</sup> of space at the trade fair with all kinds of solutions involving valuable technologies for consultancy and engineering, storage and charging for electric vehicles, residential and industrial installations.**

At this important trade event, **IFEMA MADRID**, will be supported by the **Institute for Energy Diversification and Saving (IDAE)**, which **will bolster its presence at GENERA** with its own stand located in **pabellón 10**. The promotion of renewables and the associated national value chain will be the main feature of this space, with which **IDAE will begin its 40th anniversary celebrations** and which aims to facilitate the **meeting and exchange of ideas** to continue **advancing in the construction** of this **new industrial, economic and social era** that represents the green transition made by Spain and the whole of its society.

**Participating companies will comprise a comprehensive showcase of all energy and environment-related technologies** such as **energy efficiency, renewable energies** such as **photovoltaic, solar or wind; Smart Grid electricity networks; large-scale energy storage, thermal storage technologies;** and **innovative solutions** to manage the instability of **renewable sources**. The event will also showcase improvements in building efficiency, energy management systems and smart solutions for energy efficiency, as well as options for sustainable mobility and smart solutions for environmental management.

**GENERA** will therefore be the platform to showcase the **great opportunities** that are emerging due to the **industry's growing interest and commitment** to address energy and environmental challenges. And, in its upcoming edition, the **presence of international companies** is set to increase, representing more than 40 % of total participation, with companies coming from countries such China and Turkey.

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 16 29 18  
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**Helena Valera**  
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Likewise, the fair will be the space where the grouped participation of some of the main **sectoral associations** such as the Spanish Photovoltaic Union, **UNEF** - Genera Solar; the solar energy cluster, **SOLARTYS**; the National Association of Energy Services Companies, **ANESE** and **A3e** will come together.

**Visitor registration is already open** for professionals to get their pass **through the following link**.

**Genera is to be held from 6 to 8 February 2024**. Find all the **information** on.

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 16 29 18  
psantos@ifema.es

**Helena Valera**  
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pilars@ifema.es

## The energy and environment sector will be analysed from different perspectives at the GENERA 2024 Forum.

The largest commercial platform for this industry, the Genera Forum will once again present a series of presentations and congresses focusing on innovations, solutions and keys to the transition to sustainable energy.

In addition, the GENERA SOLAR Forum, organised jointly with the Spanish Photovoltaic Union (UNEF), will feature informative sessions and presentations on innovative developments in the solar energy sector.

**Madrid, xx January 2024.- GENERA**, the International Energy and Environment Fair, organised by **IFEMA MADRID**, will take place from **6 to 8 February**. It will be **supported** by the **Institute for Energy Diversification and Saving (IDAE)**, part of the Ministry for Ecological Transition and the Demographic Challenge and will have the **backing of the main associations in the energy sector** to complement the congresses and presentations at this forum.

**This year's event** will be a clear example, **presenting advances and new innovative models**, discovering **new technologies** in the industry, **storage, energy transition and decarbonisation** or **clean, sustainable and renewable energies**, among other topics.

It **will also serve to share knowledge among leaders in the energy and environment sectors**, highlighting the **importance of global cooperation** among all stakeholders to **address today's energy challenges**, while keeping the search for **sustainable solutions as a key priority** to ensure a **clean and resilient energy future**.

Some of the associations or institutions that will take part in the Genera Forum are **ACOGEN, AEE, ADHAC, AeH2, AELEC, AEPIBAL, AMI, ANESE, APPA, ASEALEN, ASEME, ASIT, ATECYR, ATEG.ES, A3E, CENER, CIDE, Ciemat, COGEN España, ENTRA, FENIE, ICOG, IMDEA Energía, SOLARTYS** and **UNEF**, among others.

Professionals wishing to attend the fair and the **Genera Forum** can already obtain their badge via the **visitor registration**, which can be accessed via this [link](#).

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pilars@ifema.es

**Genera, the International Energy and the Environment Fair, will be held from 6 to 8 February 2024 in pavilions 9 and 10 of IFEMA MADRID. Find all the information via this link.**

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pilars@ifema.es

## The GENERA 2024 Innovation Gallery showcases 33 state-of-the-art energy solutions.

Genera, the International Energy and Environment Fair, will take place from 6 to 8 February at IFEMA MADRID with the support of IDAE, the Institute for Energy Diversification and Saving.

This initiative aims to showcase the most outstanding technological advances in the energy sector, creating a unique platform with cutting-edge solutions that will drive the energy transformation. The designated location is space 9PLZ01.

Madrid, 2 February 2024 - GENERA presents the Innovation Gallery once again. This space will bring together **33 technological innovation projects** carried out by **exhibiting companies and public and private organisations** that contribute to **improving the world of energy and society** in general.

The **Innovation Gallery is situated in the heart of the connection between pavilion 7 and 9, in space 9PLZ01.** It showcases **advances and research in renewable energy, energy efficiency, energy storage, transformation, and development.** The gallery brings together leading companies, start-ups, organisations, and associations to promote R&D&I.

The participating projects were selected by a high-level committee comprising of prestigious professionals from **COGEN, OECC, AEE, CIDE, APPA, ASIT, ANESE, CIEMAT,** and **ATECYR.** The committee focused on the innovation factor, energy efficiency, applicability, and strategic factor.

### The projects featured in the Innovation Gallery are:

#### **Acoplan PMC - ACOFILE Document Manager :**

The First Document Manager was developed by planners in the renewables sector. It integrates the storage and management of all project documentation with the modelling of client approval processes. It also automatically generates progress updates, progress curves, and updates engineering deliverables lists.

#### **BeePlanet Factory - Sustainable storage for charging points:**

The project aims to solve the issue of insufficient power in charging infrastructures by implementing a battery storage solution. BeePlanet uses its proprietary technology to repurpose automotive modules and construct modular stationary storage units. The solution is modular,

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pilars@ifema.es



sustainable, and easily scalable. The architecture prioritises the provision of charging points and other energy consumption facilities, while maximising the integration of renewable energy sources. BeePlanet uses a patented system to efficiently select modules, reducing time and improving reliability. The Battery Management System (BMS) adjusts to various battery chemistries and conditions, enhancing efficiency and longevity.

**Bluesolar Filters - Bluesolar:**

The technology combines photovoltaic and solar thermal energy by integrating a smart solar radiation filter into the glass of a photovoltaic panel. It behaves as a transparent material in the visible wavelengths, where photovoltaics are highly efficient, but acts as a mirror in the wavelengths where photovoltaics are not efficient, specifically in the blue and infrared range. The energy reflected by the photovoltaic panel is collected in a thermal receiver located in a central tower. The generated heat can be used for decarbonising industrial processes or for thermoelectric applications by integrating steam turbines.

**Cameto - Cameto Steep Slopes:**

There is a lack of specific solutions for installing photovoltaic structures on steep slopes. Common structures have been installed, but they may not be suitable for challenging site conditions. The primary goal of this project is to explore the potential of hybridisation, as outlined in RD-Law 23/2020: "Holders of access permits for electricity generation facilities that incorporate renewable energy sources or storage facilities may use the same connection point and access capacity already granted, as long as the new facility meets the applicable technical requirements". The primary challenge is to address the construction of structures with more than two frames and two-post frames. In the exhibition, the causes of the issue will be presented, and potential solutions will be proposed.

**Chemitek - Scientific report demonstrates a real 3% increase in cumulative energy production with innovative anti-solar coatings:**

ChemiTek Solar and the Green Energy Park in Benguerir, Morocco, have successfully completed testing of their anti-dirt coatings, resulting in a 3% increase in cumulative energy production. The article titled 'Performance analysis of innovative cleaning and soil mitigation solutions in the semi-arid climate of Benguerir, Morocco' was featured in Heliyon. The study assessed antistatic and hydrophobic coatings for solar panels in semi-arid environments. After a period of nine months, the coated panels demonstrated an average performance increase of 10% during the cleaned period and 5% during the unclean period. The coatings demonstrated a remarkable durability, as evidenced by the 3% cumulative energy gain.

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**CIEMAT - Hystore:**

HYSTORE aims to prove the viability of using hydrogen-bearing organic liquids in zero-CO2 electrochemical devices. These liquids can be used for energy production through their dehydrogenation and for hydrogen storage during their reversible operation. Recent decades have seen remarkable advances in proton exchange membrane (PEM) cell technology. However, challenges persist, particularly with regards to fuel storage and transportation in applications where power systems have weight and volume restrictions. To compete with alternatives, it is crucial to increase the power density of the systems and reduce their manufacturing costs.

**Circutor - PVM solar canopy for self-consumption with integrated charging point:**

The photovoltaic canopies include an integrated charging point within their structure. This solution simplifies the charging process in the work environment. The optimal solution for addressing the charging requirements of extensive electric vehicle fleets is to integrate photovoltaic canopies into the parking area and incorporate charging capabilities into the structure. This approach not only optimises the parking area but also enables the provision of services to numerous electric vehicles.

**CSL Communications Iberia - Clean Energy and Solid Connectivity: Community Photovoltaic Installation with CSL SIM and CSL Router:**

The aim of this project was to enhance the sustainability and energy efficiency of a housing estate in Dénia. This was achieved by installing photovoltaic solar panels on the community roof. The aim was to decrease the shared bill, particularly because of the excessive usage of the pool's water treatment facility. However, it was identified that success depended crucially on efficient remote management and precise optimisation of energy consumption. The solution implemented includes the CSL Router with dual SIM Roaming, which ensures stable connectivity by automatically activating the second SIM in case of signal loss. This measure proactively eliminated interruptions in remote management and optimised consumption, strengthening the reliability of the PV installation.

**Eficia Smart Building - Balancing energy savings and thermal comfort: key to Decathlon's sustainable success with the support of Eficia:**

The world's first fully integrated smart building solution for controlling energy consumption in commercial buildings. The solution optimises the operation of HVAC (heating, ventilation, and air-conditioning) and lighting equipment in real-time using intelligent algorithms. Our team of energy engineers is available 24/7 to ensure continuous support. An offer that combines both technology and human expertise to achieve the energy efficiency objectives of each customer. It manages the complete value chain required to implement the control system. It also manages operations, from physically installing connected objects to programming the system by its teams.

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**Energy Pool - Optimisation of Self-consumption, Energy Management in Energy Markets and Flexibility: A case study of integrated PMS and EMS in a Dutch industrial prosumer:**

Energy Pool's software provides flexible market monetisation features with advanced forecasts based on data from multiple sources, including weather forecasts for expected solar production, market forecasts, and information on the availability of on-site stored energy. This enables industrial prosumers to make better-informed energy purchasing decisions every day, despite the complex arbitrage required. The result is an increase in self-consumption and optimisation of tendering and energy procurement. Energy Pool's software integrates local energy management, energy optimisation, market optimisation and flexibility market monetisation seamlessly. The solution helps Mopabloem reduce its energy costs and positions the company as a prosumer contributing to grid stability and reducing greenhouse gas emissions. In the future, industrial prosumers like Mopabloem who want to offer their distributed flexibility resources to transmission system operators through incentive schemes could increase their revenues.

**IMDEA Energía and ODQA Spain - Decarbonisation of industrial processes by concentrated solar power:**

Odqa has developed an innovative solar thermal technology for decarbonising high-temperature industrial processes. The Converger is an air-based solar receiver that can efficiently generate heat up to 1,200°C. It is integrated with Thermal Energy Storage (TES) to increase thermodynamic efficiency. The IMDEA Energía Institute is providing its facilities, including heliostats, a tower, and a control centre, for the Horizon Europe Solar Hybrid Air-sCO<sub>2</sub> Power Plants project, SHARP-sCO<sub>2</sub>. The institute is also responsible for designing and dynamically modelling the concentrated solar field where the 'receiver' will be tested.

**INGEUS - Platform for Green Jobs:**

The Green Employment Platform is a collaborative space for multiple stakeholders, designed to connect new jobs created by the Ecological Transition with people in vulnerable situations. The platform aims to qualify around 900 individuals in vulnerable situations for employment. It aims to use green transition initiatives and projects that will be developed in the coming years to facilitate the integration of unemployed individuals into new green jobs.

**ISEMAREN - FlexGenera:**

Identify and mitigate financial and operational risks in your projects and hybridisations comprehensively. It ensures compliance with the network code, avoids design and modelling errors, and maximises the economics of each project. From assessing connection capacity to considering hybrid technologies, the successful continuous operation of the wind farm is guaranteed. Models such as digital twin and hardware in the loop are used and action plans in case of non-compliance are proposed, thus mitigating penalties.

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**K Electric Provider Products – Kbox:**

The KBOX is notable for its ability to maximise profitability by efficiently using surplus solar energy. It is also highly versatile, capable of adapting to both residential and industrial environments. However, the uniqueness of this solution lies in its universal compatibility, enabling integration with inverters of various brands. By analysing real-time solar energy production, the system dynamically adjusts consumption in various systems, including air conditioning, gas and oil boilers, aerothermal energy, charging points for electric vehicles, and industrial processes. It prioritises consumption when there is a surplus of solar energy. The K-BOX is an innovative and versatile solution that optimises energy consumption in various applications, contributing to efficiency and sustainability. Its ECO function has proven to achieve up to 30% savings in aerothermal consumption, consolidating its position as a key figure in the transition to a more sustainable future.

**Linc-Evolution – Solar greenhouse with ecological cultivation:**

The project involves a 4-metre-tall structure that accommodates crops underneath. This design ensures that different crops can grow without any issues and is practical for the farmer. The structure is covered with modules positioned strategically to ensure that every part of the plantation receives direct sunlight at some point during the day. Additionally, the chosen modules are bifacial and translucent, tailored to the crop's requirements to promote optimal growth while fulfilling the farmer's energy needs for local consumption, electric mobility, and even nearby consumers. This results in reduced water usage and less reliance on pest control products due to the protective mesh.

**Linc-Evolution – Ultra-fast 8-tap electric car battery station with accumulation and intelligent management:**

The project comprises of photovoltaic canopies that can be installed on the ground or roof, depending on the location. It also includes 8 ultra-fast charging points that can be extended in groups of 2 units, delivering up to 120kWh of energy per charging point (extendable with a cooling system for the charging hoses). Additionally, it features battery storage of 100kWh to 3MWh in a container format, which can also serve as a rest area in locations where such a service is not available for the user.

**Lone Lighthouse – Installation of Sunstyle® solar shingles:**

The Sunstyle® solar roof tile is a product that is part of solar architecture or BIPV. This involves integrating photovoltaic modules into the building envelope. BIPV systems serve as both a building envelope material and an energy generator. They offer savings in building materials and electricity costs, while also adding architectural interest to the building. The solar shingles contain crystalline photovoltaic cells that are embedded in a layer of ethylene vinyl acetate (EVA) that is both flexible

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GENERA Press Officer  
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evalera@ifema.es

**Pilar Serrano**  
Secretary  
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pilars@ifema.es

and stable. These are covered by a layer of tempered solar glass, which protects the crystalline cell and makes the roof strong, and a tough plastic film or glass on the back. The durability of the tiles allows them to be walked on during installation, making them easy to install. Furthermore, we provide pre-assembled ceilings to eliminate the need for on-site measuring, cutting, or drilling by the installer.

**Lone Lighthouse - Nomad Energy Box:**

This mobile solution allows production of photovoltaic energy using Plug&Play technology, without the need for building work or complex permit procedures. It is adaptable to any environment. The design of the installation allows for quick folding in case of adverse weather conditions such as storms, hail, or strong winds that could cause damage. This protects the installation inside the sea container. The sea container is Convention for Safe Containers (CSC) certified, ensuring compliance with all international safety standards and maintaining the integrity of the entire solar generator during transport. The NOMAD Energy Box has multiple applications and contributes to the decarbonisation of the economy. It enables companies that were previously limited by technical constraints such as space, environmental issues, or the need for frequent relocation of installations to participate in the energy transition.

**Nidec Industrial Solutions - Nidec-DirectPower Multi Solution with Integrated Batteries:**

The project comprises a Nidec Direct Power Multi 115kWh system, a DPDC300 charger, and an HVO generator, resulting in a 100% off-grid charging solution. With the EMS and DLM software developed by Nidec, one can seamlessly switch between the battery network, the HVO generator, and PV generation (if available). The different charging requirements for various vehicles can also be accommodated. This solution is essential in situations where grid power is limited, or non-existent and ultra-fast charging of electric vehicles is necessary. This solution is completely independent of any network, ensuring full availability to meet the customer's needs.

**Plug And Play Energy - Smart Climate Agri-Pv:**

The SMART CLIMATE AGRI-PV project aims to develop an expert system that uses artificial intelligence and drone-based remote sensing technology to optimise climate-smart crop production and photovoltaic energy production in agro-voltaic systems. To define a flight planning protocol and methodology for data collection inside the greenhouse, agriculture 4.0 technologies like Artificial Intelligence, spectral sensors, and remote sensing with drones are employed.

**Plug And Play Energy - Smartbatt:**

This is a model for researching and developing new containerised systems for storing and intelligently managing hybrid energy. Therefore, the R&D project was initiated with the primary goal of developing a new intelligent system to efficiently manage energy in

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psantos@ifema.es

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International Press  
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**hybrid grids.** The objective is to integrate various energy sources to prioritise the use of renewable energies in scenarios of maximum energy efficiency. This will create an intelligent energy management system that generates and consumes energy in the same location, minimising losses. The system will be decentralised, allowing for intelligent management with batteries and renewable energy sources. It will offer a scalable and easy-to-install solution in a containerised and modular format.

**PMT - Premium Mounting Technologies - PMT Easy:**

PMT EASY has been designed specifically to meet these challenges. Our mounting system allows for efficient and safe installation of large photovoltaic modules on flat roofs. Handling solar panels has never been easier, thanks to our unique mounting system and Push-&-Click technology. PMT EASY simplifies module maintenance, reduces downtime, and extends system lifespan. The ballasting of the light simplifies installation, optimises weight distribution, and contributes to the stability of the system. For sustainable and reliable PV installations, investing in an efficient solution for large projects and ensuring maximum system security with EasyPlates cross-connection and flexible ballast.

**Pvcase, UAB - Ray Tracing: The Future of Yield Modeling:**

'Ray Tracing: 'The Future of Performance Modelling' introduces PVcase Yield, a cutting-edge cloud-based software that uses ray tracing technology. This initiative is a major advancement in the design of utility-scale solar energy systems. The project illustrates how modern technology can enhance the precision and efficiency of solar project planning. It combines professional precision with innovative thinking, representing a significant advancement in the PV sector. This breakthrough illustrates the potential of technology to transform renewable energy planning and implementation.

**Quadrisol Unipessoal - Quadrisol "Plug&Play" electrical panel:**

It is an all-in-one AC electrical panel that includes solar inverters. The primary goal is for customers who purchase this solution to increase their productivity at work. We anticipate a 30% reduction in installation time. Quadrisol also provides warranty and technical support for the inverters installed in 'Plug&PlaybyQuadrisol'. Our technician has already pre-programmed these solar inverters. Quadrisol will offer Plug&PlaybyQuadrisol solutions for photovoltaic plants with an installed capacity of over 100kWp. It is worth noting that our product has been validated by SAJ ELECTRIC, the manufacturer of the solar inverters, which adds credibility to our solution.

**Qente Acs - Hot water, instantly:**

The world's first integrated point-of-use water heating system. The technology, which is powered by solar panels and an innovative lithium battery, provides immediate, temperature-controlled hot water to all consumption points in the home. Each Qente user saves over 12,000 litres of drinking

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water and 730 kWh of energy annually, resulting in an average yearly saving of €1050 on utility bills for a family of four.

**R2m Solution Spain - Manza Energía:**

The Manza Energía Energy Community is a project promoted by the Manzanares el Real Town Council and driven by its residents. R2M Solution serves as a consultant for the design, support, and development of the community. The Manza Energía project began in January 2022 and comprises three initiatives: the Neighbourhood Energy Community, the Energy Office (which provides energy advice to residents of the municipality), and Manza 50/50 (which supports the educational community in an energy-saving project). PV4Plants will also feature.

**Repsol - Solar Communities REPSOL SOLMATCH:**

This service provides a self-consumption solution that brings energy generation closer to the point of consumption. It operates through Solar Communities, where local and 100% renewable electricity is generated from photovoltaic panels installed on building roofs. This allows households located within a 2,000-metre radius to connect and enjoy 100% renewable electricity.

This model enables collective self-consumption as a service for companies interested in adopting a new approach to energy production and consumption. The objective is to offer a self-consumption service through a long-term power purchase agreement (PPA) on site, with the possibility of sharing solar energy produced in their own facilities (rooftop or nearby land) to create a business solar community. This model allows companies to connect to multiple supply points (CUPS, according to its initials in Spanish), whether their own or from neighbouring companies, without any investment on their part throughout the life of the contract. It is designed for the production and consumption of renewable energy for 10-15 years. It enables many companies to become self-sufficient in electricity production and encourages environmentally responsible consumption.

**Sistemas Integrales Vortex - SIE's new monitoring platform for the management of kWh storage from renewable energies:**

The project involves developing a suite that monitors and processes surplus solar energy and electricity demand. This suite includes meters and a cloud platform. The devices will measure energy production and consumption in real-time, and the platform will convert the data obtained into 'energy exported' and 'imported'. Communication between devices and platforms can occur through 3G or Wi-Fi. The software's multi-tenant architecture design is noteworthy as it allows for one instance of the software to serve multiple clients while customising elements without altering the code. The benefits of this system include the ability to use stored energy at any time, redirect excess energy to other consumption points, share production systems, and optimise energy usage in seasonal situations. It introduces an innovative 'Annual Energy Exchange System', which allows

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for the accumulation of unconsumed kWh. This statement highlights a distinction from other companies that provide economic balance sheets in euros.

**Slenergy Technology - iShare-Home - One-Stop Residential Smart Energy System:**

Following its remarkable success in Europe in 2023, the iShare-Home comprehensive smart home energy solution now includes solar panels, a hybrid inverter, an energy storage battery, a mounting structure, a wiring harness, a smart energy management system, a heat pump, a smart EV charger, and a SmartBox, providing complete protection. The upgraded iShare-Home system's key feature is its intelligent operation and maintenance, facilitated by the SmartBox. By using this IoT hardware, which collects real-time operational data and executes intelligent control strategies, homeowners can gain complete control over electricity generation and consumption in real-time. This results in reduced costs and optimal self-sufficiency.

**Smilics Technologies - Discovering the consumption of household appliances thanks to AI:**

The use of machine learning algorithms to detect household appliance consumption provides a cost-effective, sustainable, and innovative solution for monitoring household electricity consumption in detail. This approach is currently employed by large retailers in the IBEX35, who offer this information to their customers as an added value. Retailers can customise offers and promotions by understanding how energy consumption is distributed among the different appliances in their customers' homes. This enables them to provide customised plans that meet the unique needs and usage patterns of each customer, leading to higher levels of customer satisfaction and loyalty. Furthermore, providing this detailed information promotes more efficient energy usage practices. Retailers can provide personalised advice on how to reduce energy consumption in specific areas, promoting awareness and commitment to energy efficiency.

In addition to **Solarbox** and **Sirius, Wallbox Chargers** also participated in the project.

**Genera is to be held from 6 to 8 February 2024. Find all the [information on the website](#).**

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 16 29 18  
psantos@ifema.es

**Helena Valera**  
International Press  
Tel.: +34 629 64 42 08  
evalera@ifema.es

**Pilar Serrano**  
Secretary  
Tel.: +34 648 18 92 18  
pilars@ifema.es



### **GENERA 2024 is continuing to expand globally.**

**The International Energy and Environment Fair will have 39% of exhibitors travelling from abroad. The presence of Chinese, Turkish, and German companies is noteworthy.**

The Fair will take place from 6 to 8 February at IFEMA MADRID, with the support of IDAE, the Institute for Energy Diversification and Saving.

**Madrid, 25 January 2024.- GENERA** continues to break records. At this year's **International Energy and Environment Trade Fair**, the number of participating companies has increased by **24%** compared to the previous year, reaching **500 exhibitors**. The exhibition area has also **grown by 30%**, now covering **24,000m<sup>2</sup> of exhibition space**.

### **GENERA 2024 enhances its international character.**

The fair will transform Madrid into an **important gathering place for professionals, experts, and leaders** in the energy industry. This is due to the participation of companies from all over the world at IFEMA MADRID. This yearly occasion has become an **essential point of reference** for professionals seeking the **most recent trends and solutions** in the realm of **renewable energy** and the **environment**.

In the **business context**, **GENERA** has experienced **significant growth** in recent years, particularly in terms of **international participation**. It has gained recognition as the **ideal platform for establishing alliances, promoting collaborations, and learning about the latest market innovations** in renewable energies, energy efficiency, and environmental technologies.

The **figures demonstrate the increasing internationalisation of the event**. Notably, out of the total number of exhibitors, **208 companies from 23 countries participated, highlighting a significant presence of foreign companies**. These figures represent **approximately 41% of the total business participation** at the fair.

**China has the largest number of exhibitors**, accounting for **19%** of the total. **Türkiye and Germany follow with 7% and 4%**, respectively. Other countries represented include Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Cyprus, the USA, Spain, France, Israel, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, the Czech Republic, Singapore, Sweden and Switzerland.

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 16 29 18  
psantos@ifema.es

**Helena Valera**  
International Press  
Tel.: +34 629 64 42 08  
evalera@ifema.es

**Pilar Serrano**  
Secretary  
Tel.: +34 648 18 92 18  
pilars@ifema.es

**Wind and solar energy are the main sources of energy in Spain.**

The sectoral data also confirm **our country's privileged position in the production of renewable energy** in an international context. This is due to our geographical location. According to EY's **Renewable Energy Country Attractiveness Index report**, which ranks the top 40 markets for renewable energy investment attractiveness, **Spain remains in eighth place**.

According to **Red Eléctrica**, in terms of energy production in Spain, **wind and photovoltaics are the main renewable energy sources**. In 2023, **wind** accounted for **almost 24%** of total energy production and **solar for 14%**. **With a share of 9.5%, hydropower** is also on this list.

**Genera is to be held from 6 to 8 February 2024**. Find all the **information on the website**.

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 16 29 18  
psantos@ifema.es

**Helena Valera**  
International Press  
Tel.: +34 629 64 42 08  
evalera@ifema.es

**Pilar Serrano**  
Secretary  
Tel.: +34 648 18 92 18  
pilars@ifema.es

### **Tomorrow marks the start of GENERA 2024, the foremost event for renewable energy and energy efficiency.**

The fair will be opened by Teresa Ribera, the Third Vice-President of the Government and Minister for Ecological Transition and the Demographic Challenge.

**The International Energy and Environment Fair will commence tomorrow, 6 February, with a record-breaking number of companies and exhibition space. The event boasts 500 exhibitors and over 24,000m<sup>2</sup> of exhibition space, showcasing the increasing significance of the renewables sector.**

**Madrid, 5 February 2024.-** The **GENERA International Energy and Environment Fair** will open tomorrow and will be inaugurated at 12:00 noon by **Teresa Ribera**, the Third Vice-President of the Government and Minister for Ecological Transition and the Demographic Challenge. **In commemoration of its 40th anniversary, this new event, once again supported by IDAE** (the Institute for Energy Diversification and Saving), will have a stand in pavilion 10 where various activities and conferences will take place.

**GENERA 2024** is the **ideal place** to discover the **latest advancements in energy efficiency, technology tailored to the sector** and the **environment**, along with a full programme of activities included in the two forums: the **Genera 2024 Forum** and the **Genera Solar Forum**.

The upcoming **GENERA 2024** event promises an impressive turnout, with a **25% increase in the number of participating companies, totalling 500 exhibitors**. These companies will showcase their innovations in a **24,000m<sup>2</sup> exhibition area** located in **pavilions 9 and 10 of IFEMA MADRID, alongside technical conferences held in the Centro de Convenciones Norte**.

The **event's strength** lies in the **presence of international companies**, making it a **reference showcase for the energy sector**. The data demonstrates that the International Energy and Environment Fair will have **208 companies from 23 countries, representing 41% of global participation. Companies from Germany, China, and Türkiye stand out**. The list is complete and includes Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Cyprus, Czech Republic, France, Israel, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Singapore, Spain, Sweden, Switzerland, and the USA.

The **GENERA 2024** fair will be attended not only by a full list of participating companies but also by leading associations and institutions in the sector. These include the **Association of Energy Efficiency Companies (A3E)**, the

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 1629 18  
psantos@ifema.es

**Helena Valera**  
International Press  
Tel.: +34 629 64 42 08  
evalera@ifema.es

**Pilar Serrano**  
Secretary  
Tel.: +34 648 18 92 18  
pilars@ifema.es

**National Association of Energy Services Companies (ANESE), the Business Association for the Development and Promotion of Electric Mobility (AEDIVE), Solartys, the Spanish solar energy and energy transition cluster, and the Spanish Photovoltaic Union (UNEF).** The fair will feature participation from various organizations, including **ACOGEN, AEE, ADHAC, AeH2, AELEC, AEPIBAL, AMI, APPA, ASEALEN, ASEME, ASIT, ATECYR, ATEG.ES, CENER, CIDE, Ciemat, COGEN España, ENTRA, FENIE, ICOG, IMDEA Energía, among others.**

### **A professional programme on energy issues**

The exhibition space will be accompanied by a full programme of presentations, forums, and congresses held in different areas of the fair. These include the **Genera Forum** located in **pavilions 9 and 10**, the **Genera Solar Forum in pavilion 10**, and the **IFEMA MADRID Centro de Convenciones Norte**.

It will be a platform for **sharing knowledge among associations, companies**, and leading **institutions** in the energy and environment sector. The aim is to foster cooperation among all the actors in the sector to **address the energy challenges facing today's society** and work towards a future of clean energy.

The topics to be discussed in these spaces include **advances and innovative models, emerging technological tools and applications, energy transition and decarbonisation** projects, developments in energy storage, and progress towards **clean, sustainable, and renewable energy**.

**Please consult the complete schedule of activities by following this link.**

### **Technological breakthroughs showcased in the Innovation Gallery**

**GENERA 2024** will also feature an **Innovation Gallery**. This initiative aims to showcase the most notable **technological advancements** in the energy sector. It has selected **33 projects that are highly innovative** and applicable to this field.

The Innovation Gallery is situated in the **Networking area**, in the connecting core of pavilion 9, opposite the Forum, stand 9PLZ01. It will showcase projects related to **renewable energy, energy efficiency, energy storage, transformation, and development** from leading companies, organisations, and associations.

**Genera will take place from 6 to 8 February 2024**, between 10:00 and 19:00.

Find all the **information on the website**.

**Pablo Santos**  
GENERA Press Officer  
Tel.: +34 648 1629 18  
psantos@ifema.es

**Helena Valera**  
International Press  
Tel.: +34 629 64 42 08  
evalera@ifema.es

**Pilar Serrano**  
Secretary  
Tel.: +34 648 18 92 18  
pilars@ifema.es

**Organizing Committee GENERA 2024****President:****Joan Groizard**

General Director IDAE - Institute for the Diversification and Saving of Energy

**Members:****Ginés Angel García López**

President

A3e - Association of Energy Efficiency Companies

**Javier Rodríguez Morales General**

Director

ACOGEN (Spanish Association of Cogeneration)

**Juan Diego Díaz Vega**

President

AEE - Wind Business Association

**José Javier Brey Sánchez**

President

AeH2 - Spanish Hydrogen Association

**Marina Serrano**

President

AELEC - Association of Electric Power Companies

**Jordi Ortiz General**

Director

AEPIBAL, Business Association of Batteries, Batteries, and Energy Storage (SECARTYS)

**Francisco Javier Sigüenza**

General Secretary

AMI - Association of Companies for Integral Maintenance and Energy Services / ADHAC  
Association of Companies for Heating and Cooling Networks

**Pablo Santos**

Jefe de Prensa GENERA  
Tel.: +34 648 16 29 18  
[psantos@ifema.es](mailto:psantos@ifema.es)

**Helena Valera**

Prensa Internacional  
Tel.: +34 629 64 42 08  
[evalera@ifema.es](mailto:evalera@ifema.es)

**Pilar Serrano**

Secretaría  
Tel.: +34 648 18 92 18  
[pilars@ifema.es](mailto:pilars@ifema.es)

**Carlos Ballesteros Barrado**

General Director

ANESE - Association of Energy Services Companies

**Andreu Puñet Balsebre**

General Director

AOP - Spanish Association of Petroleum Product Operators

**Santiago Gómez Ramos**

President

APPA Renewables - Association of Renewable Energy Companies

**Oleguer Fuertes**

President

ASIT - Solar Thermal Industry Association

**José Porras**

President

ATECYR - Spanish Technical Association of Air Conditioning and Refrigeration

**Julio Cano**

Member

ATECYR - Spanish Technical Association of Air Conditioning and Refrigeration

**Pablo Ayesa General**

Director

CENER - National Center for Renewable Energies

**Leonardo Hervás Hermida**

General Director

"CIDE-Association of Electricity Distributors"

**Yolanda Benito Moreno**

Director of the Department of Environment

CIEMAT - Center for Energy, Environmental, and Technological Research

**Pablo Santos**Jefe de Prensa GENERA  
Tel.: +34 648 16 29 18  
[psantos@ifema.es](mailto:psantos@ifema.es)**Helena Valera**Prensa Internacional  
Tel.: +34 629 64 42 08  
[evalera@ifema.es](mailto:evalera@ifema.es)**Pilar Serrano**Secretaría  
Tel.: +34 648 18 92 18  
[pilars@ifema.es](mailto:pilars@ifema.es)

**Julio Artiñano**

President

COGEN SPAIN - Spanish Association for the Promotion of Cogeneration

**Alicia Carrasco**

Director

ENTRA Association of Electric Agents and Companies and Energy Services

**Valvanera Ulargui Aparicio**

Director -Spanish Office of Climate Change (OECC) Ministry for the Ecological Transition and the Demographic Challenge

**José Donoso**

General Director

UNEF - Spanish Photovoltaic Union

**Juan Azcárate Luxán**

Deputy General Director of Energy and Climate Change -CITY OF MADRID

**Fernando Arlandis Pérez**

General Director

COMMUNITY OF MADRID - General Directorate of Decarbonization and Energy Transition

**Juan Arrizabalaga**

General Director.IFEMA MADRID

**Arancha Priede**

Director of Business.IFEMA MADRID

**Ana Larrañaga**

Deputy Director of Business .IFEMA MADRID

**Alberto Leal**

Director of Genera .IFEMA MADRID

**Pablo Santos**Jefe de Prensa GENERA  
Tel.: +34 648 16 29 18  
[psantos@ifema.es](mailto:psantos@ifema.es)**Helena Valera**Prensa Internacional  
Tel.: +34 629 64 42 08  
[evalera@ifema.es](mailto:evalera@ifema.es)**Pilar Serrano**Secretaría  
Tel.: +34 648 18 92 18  
[pilars@ifema.es](mailto:pilars@ifema.es)

**GENERA 2024 staff**

Director

**Alberto Leal**

Commercial Manager

**Beatriz Pérez-Frade**

Commercial Manager

**Marta Ariste**

Advertising and Digital Content

**Borja Frutos**

Secretary- National Area

**Virginia Montouto**

Secretary- Internationa Area

**Patricia de Carlos**

**Pablo Santos**

Jefe de Prensa GENERA  
Tel.: +34 648 16 29 18  
[psantos@ifema.es](mailto:psantos@ifema.es)

**Helena Valera**

Prensa Internacional  
Tel.: +34 629 64 42 08  
[evalera@ifema.es](mailto:evalera@ifema.es)

**Pilar Serrano**

Secretaría  
Tel.: +34 648 18 92 18  
[pilars@ifema.es](mailto:pilars@ifema.es)



**Communication Department GENERA 2024**

Communication and Marketing Director

**Raúl Díez**

Communication and Press Director

**Marta Cacho**

Press Officer

**Pablo Santos**

T: +34 648 16 29 18

Email: [psantos@ifema.es](mailto:psantos@ifema.es)

International Press

**Helena Valera**

T: +34 629 64 42 08

Email: [evalera@ifema.es](mailto:evalera@ifema.es)

Secretary:

**Pilar Serrano**

T: +34 648 18 92 18

Email: [pilars@ifema.es](mailto:pilars@ifema.es)

**Pablo Santos**

Jefe de Prensa GENERA  
Tel.: +34 648 16 29 18  
[psantos@ifema.es](mailto:psantos@ifema.es)

**Helena Valera**

Prensa Internacional  
Tel.: +34 629 64 42 08  
[evalera@ifema.es](mailto:evalera@ifema.es)

**Pilar Serrano**

Secretaría  
Tel.: +34 648 18 92 18  
[pilars@ifema.es](mailto:pilars@ifema.es)