









# Draft EVENT PROGRAM

### \*to be finalized

### **LEGEND**

**OPENING CEREMONY** 

**KEY ENERGY SUMMIT** 

**FORUMTECH** 

SEC - SOLAR EXHIBITION CONFERENCE

WEM - WIND EXPO FOR MED

**SU.PORT - SUSTAINABLE PORTS** 

**KSE - KEY STORAGE** 

**HYPE - HYDROGEN POWER EXPO** 

**EME - EMOBILITY EXPO** 

**EFFY - ENERGY EFFICIENCY EXPO** 

**SUSTAINABLE CITY** 

**CROSS-CUTTING TOPICS** 



#### **OPENING CEREMONY**

Organized by KEY - The Energy Transition Expo

Opening event of the 19th edition of KEY - The Energy Transition Expo, the European event dedicated to technologies, services, and integrated solutions for energy efficiency and renewable energy in Italy and the Mediterranean basin.

#### **KEY ENERGY SUMMIT**

Organized by KEY - The Energy Transition Expo



#### **FORUMTECH**

### ForumTech 2026: Innovation, Regulations, and the Future of Photovoltaics. Plenary session

Organized by ITALIA SOLARE

ITALIA SOLARE's ForumTech 2026 returns with a new edition that focuses even more closely on technological and regulatory developments in the photovoltaic sector. An entire day dedicated to exploring, together with experts, businesses, and institutions, the most advanced solutions for digitization, monitoring, smart energy management, and integration with storage systems. An unmissable opportunity to navigate the latest legislative developments, discover market trends, and discuss innovative business and management models.



#### SEC - Solar Exhibition Conference

### Artificial Intelligence for the maintenance and management of photovoltaic systems

Organized by ENEA

The operation and maintenance (O&M) phase of a photovoltaic system is receiving increasing attention from industry professionals. In fact, this is a very long period of time, even more than 30 years, during which the plant operator has to meet complex commitments ranging, for example, from ensuring annual productivity that cannot fall below 2% of the contracted level to resolving plant faults within 72 hours in the most serious cases.

Photovoltaic systems, especially utilities, can also extend over several hectares and be distributed over fairly large areas, so that maintenance can be quite challenging in terms of human resources and warehouse management, with obvious repercussions on the cost of the energy produced. And, in fact, authoritative studies are beginning to show that OPEX costs are clearly increasing compared to the steady decline in corresponding CAPEX costs.

In this context, the ability to know the operational status of a plant at any given moment and to be able to predict its evolution over time through the use of artificial intelligence techniques is becoming an increasingly inevitable operational necessity.

The first part of this workshop is dedicated to illustrating methods and techniques that can be applied to the O&M phase of photovoltaic plants: from energy forecasting techniques, with their dual value in terms of productivity prediction and minimization of the effects of extreme events, to long-term prediction of plant failures with the possibility of organizing predictive rather than corrective maintenance procedures, to the use of control systems based entirely on IoT logic.

ENEA technicians who developed the applied AI knowledge will discuss this topic. The second part of the workshop will be dedicated to illustrating a case study of the methods and techniques discussed in the first part. In the MARTA project (Advanced Monitoring and Management of Photovoltaic Plants Network), funded by MIMIT through the Sustainable Growth Fund - Innovation Agreements, which is currently being completed, an Italian utility of approximately 5 MW has been revisited by applying artificial intelligence techniques to protect the processes of transferring the energy produced to the electricity grid. This will be discussed by Tea Tek spa, the plant operator, Molini Casillo, the plant owner, and ENEA, the developer and provider of the basic knowledge.

The third part is intended to be a discussion with the audience, an informal Q&A session on topics such as AI, photovoltaic energy, and non-programmable energy sources.

### Territorial acceptability of utility-scale plants: national and international best practices

Organized by Coordinamento FREE, Italia Solare

The construction of large-scale renewable energy plants (utility scale) is an essential lever for achieving national decarbonization targets. However, their spread often encounters obstacles related to territorial acceptability, with resistance from local communities and conflicts over land use and/or the visual and environmental impact of the plants. To address this challenge, it is essential to identify and promote models that combine the development of renewable energy with the generation of environmental, economic, and social benefits for the host territories and to promote a participatory approach in the development and construction phases of the plants.

The conference aims to explore national and international best practices, analyzing experiences of community involvement, compensation tools, and innovative value-sharing models.

Particular attention will be paid to practices and experiences that have transformed large renewable energy plants from a source of conflict to an opportunity for local development.

The meeting aims to provide a comparative framework that institutions and operators can use to outline replicable strategies capable of accelerating the energy transition while allowing for the development and construction of large renewable energy plants with the consent and participation of local communities.

#### Solar PV and Battery Storage Systems: the key to energy self-sufficiency, driving Africa's Energy Transition

Organized by Res4Africa

Event in English

The integration of solar photovoltaic (PV) energy generation and battery storage systems holds great promise for driving Africa's economic growth. These advanced technologies provide dependable, sustainable, and afford- able power solutions that can be tailored to meet the specific needs of various locations and industries. By embracing this technology, Africa can unlock its economic potential while addressing the energy crisis and pro- moting a sustainable future. Solar PV and Battery Storage systems are increasingly vital for expanding electricity access and stabilizing grids in Africa, driven by decreasing costs and supportive government policies across the Continent. Major projects are integrating these technologies to overcome poor grid infrastructure and reduce reliance on diesel generators. While challenges like high upfront costs and regulatory uncertainty persist, the trend shows rapid growth and potential for significant impact across the continent.

There are a multitude of ways to apply solar energy and battery storage technology to address site-specific needs. It does require a professionally engineered solution, allowing the flexibility of these systems to optimize op- erational costs and secure reasonable return on investment over the lifespan of such systems.

The panel will cover key topics such as advancements in energy storage manufacturing, the evolving role of battery storage in state-level energy policy, exploring a variety of topics around battery energy storage systems and solar PV value chain in the African Continent.

### Italy in the European and international agrivoltaic landscape

Organized by AIAS

#### The Italian agrivoltaic landscape. First session

Despite numerous difficulties, Italy is considered a beacon in Europe and worldwide for the implementation of agrivoltaics. This is mainly due to the PNRR funding measure, which has boosted the development of an agrivoltaic market in our country.

This session aims to provide an overview of the agrivoltaic landscape at the national level, highlighting what can be learned from Italy and what urgent issues need to be addressed to enable agrivoltaics to play a lasting role in the energy transition process. What is the state of agrivoltaics in Italy? This session will provide insight into the barriers, challenges, and best practices that the Italian experience can offer.

#### The European and international agrivoltaic landscape. Second session

This session aims to provide an overview of the agrivoltaic landscape at European and international level. The main associations or networks involved in agrivoltaics will be invited to present the national situation and the main issues they are facing. The goal is to identify the similarities and main differences in agrivoltaics, to learn from the experience of others and develop appropriate local approaches. Concrete experiences will also be shared, with the aim of showing the definitions and many forms that agrivoltaics can take.



#### WEM - Wind Expo for Med

### A control room to accelerate the energy transition

Organized by ANEV - National Wind Energy Association

The energy transition is proceeding at an ever-increasing pace, driven by the development of renewable energy plants. However, this acceleration faces a structural obstacle: the national electricity grid, which is often considered saturated and therefore unable to accommodate new plants. In many areas, especially in the south and inland regions, there has been an increase in the number of applications rejected due to 'lack of available capacity', even when the physical infrastructure is not actually overloaded.

This is where the concept of virtual saturation comes into play. If not updated, this model risks slowing down the development of renewables. This conference has been organized to discuss in a constructive and technical manner how to overcome the constraint of virtual saturation through regulatory, digital, and infrastructural solutions.

The goal is to build a more open, transparent, and adaptive electricity system, in which the grid is no longer a hindrance but an accelerator for the transition. To do this, collaboration between operators, regulatory updates, and a quantum leap in shared planning are needed.

### Energy that communicates – wind power, territories, and communities

Organized by ANEV - National Wind Energy Association

This conference stems from the growing need to rethink the relationship between energy transition, landscape, and democratic participation. Wind energy is an essential component of the renewable mix needed to tackle the climate crisis, but its development is currently facing resistance, conflict, and critical issues related to its integration into the territory and the involvement of communities.

Many projects are hindered not only by technical or bureaucratic reasons, but also by a lack of real dialogue with local communities. The visual and perceptual impact of turbines, the transformation of cultural landscapes, the scarcity of shared benefits at the local level, and the weakness of participatory processes are all factors that undermine the social acceptability of wind power. This conference aims to be a space for interdisciplinary discussion to strengthen the social acceptability of wind power, bringing together urban planners, administrators, citizens, businesses, landscape experts, designers, and activists, with the aim of constructively addressing the challenges and opportunities related to the future of wind power in local communities.

#### The role of materials in offshore wind power

Organized by ENEA

Offshore wind power represents a promising solution for achieving decarbonization in Italy, as it guarantees greater energy efficiency and reduced environmental and social impacts compared to onshore wind power.

To maximize the benefits of installing offshore wind farms, it is essential to carefully develop innovative and intelligent materials for all wind turbine components. The particularly harsh environmental conditions also require the development and integration of in situ monitoring methods in order to reduce system maintenance costs and increase reliability.



#### Su.Port - Sustainable Ports

### Energy from the sea: offshore wind power ready to go

Organized by AERO

The approval of the first offshore wind projects in Italy marks a decisive step towards achieving decarbonization targets and developing a new national energy industry. This conference aims to present and analyze the first authorized cases, highlighting their technical characteristics, authorization models, critical issues addressed, and future prospects. Through dialogue between developers, competent authorities, local authorities, and environmental stakeholders, lessons learned and opportunities to accelerate the sustainable spread of offshore wind power in the country will be explored. With a look at the topic of incentive auctions.

### Ports of the future: the challenge between sea, energy, and the new economy

Organized by AERO

The expansion of offshore wind power represents one of the most strategic challenges of the European and Italian energy transition. Ports, key infrastructure for logistics, assembly, and transport of wind power components, are playing an increasingly central role in the development of the offshore industrial supply chain. The conference aims to explore the role of ports in supporting the growth of the sector, analyzing the infrastructure needs, adaptation strategies, and public-private partnerships necessary to ensure efficiency and competitiveness. It will be an opportunity for discussion between institutions, port operators, companies in the sector, and the world of research.



#### KSE – Key Storage

## Storage, networks, and mobility: automotive and energy networks join forces in decarbonization

Organized by Cluster-ER Greentech Emilia Romagna

Storage is now a strategic element in ensuring the stability and security of energy networks, especially in a context of growing use of renewable sources and extreme events such as the recent blackout in Spain. At the same time, batteries are at the heart of electric mobility.

Between these two worlds—networks and mobility—synergies are multiplying in relation to storage: from intelligent charging management to the application of the vehicle-to-grid model to support the grid, from the reuse of electric car batteries in stationary applications to the development of supply chains for the recovery of critical materials from end-of-life batteries. The conference, promoted by a joint project between the Greentech and Mech Clusters and the Big Data and MUNER (Motorvehicle University) Associations of Emilia-Romagna, aims to open a dialogue between the automotive industry and network operators to explore new possible industrial alliances in support of the energy transition.

#### Sistemi di accumulo: scenari normativi e tecnologici dalla flessibilità al Net Zero Industry Act

Organized by ANIE

The conference aims to explore the strategic role of storage systems and innovative energy storage solutions in the development of the national electricity system, in light of the new European directives and the objectives of the Net Zero Industry Act.

The main regulatory drivers that will guide the integration of storage systems in Italy will be analyzed, highlighting the opportunities and challenges for the various market segments. Particular focus will be placed on the flexibility services that storage can offer to the electricity grid, promoting greater penetration of renewables and system security. Emerging technological scenarios, prospects for industrial development, and possible synergies between regulation, innovation, and the European production chain will also be examined. The event is intended as an opportunity for discussion between institutions, regulators, companies, and associations, with the aim of outlining the growth trajectories and policies necessary to make Italy a competitive player in the European climate neutrality scenario.

#### Grid and storage for a 100% renewable future

Organized by Coordinamento FREE, Kyoto Club

The growth of renewables, although slowed down in our country by too many obstacles, will be unstoppable and therefore requires—urgently—the adaptation of networks, which were created in a different technological era, and the development of short- and long-term storage systems.

Many technologies already exist, and we have seen a collapse in costs in recent years, but further innovations are on the horizon.

What choices is Europe making and what are the best practices at the continental level?

A dossier on the subject by Coordinamento Free will be presented.

#### Thermal storage for electricity grid flexibility and for supplying medium/high-temperature heat to industrial processes

Organized by ENEA

The global and national energy transition, driven by the rapid spread of intermittent renewable sources such as photovoltaics and wind power, poses crucial challenges for the stability and flexibility of the electricity grid.

To support the integration of renewables and prevent congestion and curtailment, Italy's PNIEC indicates the need to reach a total capacity of 22.5 GW by 2030, of which 11 GW will be in stand-alone batteries and 4 GW in distributed storage. According to the IREX 2025 report, between 76 and 96 GWh of new storage capacity will be needed to compensate for the expected increase in intermittent renewable sources. In this scenario, Electrothermal Energy Storage (ETES) systems, also known as Carnot Batteries (CB), emerge as an innovative and promising solution. These technologies convert renewable, low-cost electricity into heat, storing it in tanks containing readily available and inexpensive storage materials, and then converting it back into electricity or using it directly as heat.

The adoption of ETES/CBs offers a twofold strategic benefit: increased flexibility of the electricity grid and decarbonization of the industrial sector. These systems offer a sustainable, scalable storage solution that is independent of critical raw materials. CBs are ideal for medium- to long-term storage (> 4 hours) and have low investment costs (about half that of lithium batteries) and a long operating life, using robust and proven components. These systems are monitored internationally (e.g., IEA ES TCP Task 36) for their potential to solve grid flexibility challenges.

With regard to the decarbonization of industry, it is well known that the industrial sector is heavily dependent on natural gas to power mediumand high-temperature endothermic processes (chemicals, steel, nonmetallic materials), representing a strategic national vulnerability in terms of security of supply and price volatility. ETES enable the electrification of industrial heat by absorbing peaks in renewable energy production, with the potential to reduce global gas consumption by up to 40% and energy emissions by up to 14% by 2050. During the workshop, the state of development of ETES/CB at national and international level will be presented, highlighting the main technological, regulatory, and economic barriers that hinder their large-scale deployment in Italy and Europe.



#### HYPE – Hydrogen Power Expo

## From hydrogen to e-fuels: Development prospects in key sectors, penetration scenarios, and initial projects

Organized by H2IT, T&E, ENEA

E-fuels are establishing themselves as strategic energy carriers for the decarbonization of the heavy transport sector, with applications ranging from maritime to aviation. The conference explores the development prospects of the technological processes underlying the production of these synthetic fuels, analyzing the main market drivers and identifying the sectors most involved. Particular attention is paid to infrastructure challenges, with the direct involvement of key ecosystems such as ports and airports. Starting from penetration scenarios for 2030 and 2050, the first pilot and industrial initiatives currently underway are presented and discussed, with a focus on European experiences and a reflection on the potential development prospects in Italy.

## Hydrogen for hard-to-abate sectors: dialogue between supply and demand to create a market

Organized by H2IT

To accelerate industrial decarbonization without compromising European competitiveness, Europe is adopting the Clean Industrial Deal, which aims to address market barriers and promote a simpler and more stable regulatory environment. This approach should stimulate private and public investment, promoting demand for clean energy carriers such as hydrogen, a key element for the transition in hard-to-abate sectors. In Italy, the National Hydrogen Strategy recognizes the role of this vector in the decarbonization of industry, but has not yet implemented a set of effective measures to stimulate demand. The conference offers a reflection on the enabling conditions for building a competitive, integrated, and sustainable national hydrogen market, leveraging Italy's expertise and the potential for industrial growth linked to clean technologies.

#### The manufacture of clean technologies

Organized by MIMIT, H2IT, ANIE, Italia Solare, ANEV

Europe has chosen to focus on clean technologies to strengthen its industrial competitiveness through strategic initiatives such as the Net Zero Industry Act and related instruments. Thanks to its solid industrial fabric and consolidated expertise in the production of components and systems, Italy is well positioned to contribute to this transition and is making available a series of tools to support companies that intend to scale up their manufacturing production. The conference aims to raise awareness of these tools and highlight the joint work between industry associations to promote the scaling up of production facilities.

#### GERMAN-ITALIAN Energy Talk - Hydrogen

Organized by Hannover Fairs International, Hydrogen + Fuel Cells EUROPE, ITKAM, DIE GAS- UND WASSERSTOFFWIRTSCHAFT

#### Event in english

The focus is on international dialogue on the topic of hydrogen in Europe. International experts exchange ideas with Italian protagonists from the industry. The Italian and German industries are very closely linked and are defining joint solutions at the political and economic-technical levels. The main topics are business cases, financing, and infrastructure. International accounts give keynote speeches. Experts will exchange after ideas in a moderate round table discussion. A dialogue with the audience will take place. A concluding business lunch will offer networking opportunities at an international level.

### Regional Hydrogen Valleys

Organized by ART-ER

The "Regional Hydrogen Valleys" workshop explores the role of Hydrogen Valleys in sustainable territorial development and the Italian energy transition. The event will focus on the various regional green hydrogen supply chains that have been launched or are about to be launched.

In the form of talks, companies and facilitators from the various regional supply chains will present the state of development and opportunities for collaboration, highlighting strengths, weaknesses, and possible synergies that can be activated at the national level. The event aims to explore the key aspects necessary for the launch of the supply chain from a local territorial system perspective and to offer reflections on the potential of Hydrogen Valleys in the national context. This workshop will offer stakeholders a unique opportunity to exchange ideas, explore collaborations, and contribute to the progress of Hydrogen Valleys as key drivers of Italy's energy transition.

#### **H2Talk**

Organized by H2IT



#### EME – eMobility Expo

### Electric car charging between regulatory updates and technological innovation

Organized by ANIE, Motus-E

Through discussions between institutions, charging operators, and infrastructure manufacturers, Motus-E aims to take stock of the latest regulatory updates affecting the public charging sector, with a particular focus on the application of the AFIR regulation. From Plug & Charge solutions to new payment systems, this panel aims to analyze the main technological innovations in the constantly evolving sector of electric vehicle charging.

#### Charging infrastructure for freight vehicles: implementation of the AFIR Regulation in Italy

Organized by Kyoto Club, MOTUS-E, ZET Italy - in cooperation with Ecomondo

The event aims to monitor the implementation status of the AFIR regulation in Italy almost two years after its entry into force, checking the charging infrastructure built along road and motorway networks, with a specific focus on those intended for heavy goods vehicles.

In fact, the AFIR Regulation (Alternative Fuels Infrastructure Regulation), approved by the European Union, imposes mandatory requirements for the deployment of alternative fuel infrastructure and vehicle electrification, with a particular focus on heavy-duty vehicles, to ensure charging station coverage on all major European roads. In Italy, the implementation of the AFIR Regulation requires the planning and development of a national high-power charging infrastructure along the main TEN-T routes.

To achieve these objectives, significant investments are needed in the infrastructure network on motorways and logistics corridors, as well as coordination between public authorities and private operators, which is essential to meet the deadlines and targets set by AFIR.

### The charging network for electric cars: where we are in Italy and Europe

Organized by GSE, Motus-E

An essential discussion between operators, institutions, regulators, and concessionaires to assess the opportunities and challenges for creating an efficient and widespread charging network in Italy and Europe. From the role of CPOs and DSOs to tariff dynamics, through to the infrastructure of fuel stations, the PNIRE and motorway tenders: the panel organized by Motus-E will offer an up-to-date overview of the state of the art of the charging network for electric vehicles and will seek to provide an opportunity for discussion with European institutional stakeholders.

### How to electrify a company fleet: a practical guide for businesses

Organized by Motus-E

A concrete opportunity to address, together with experts and companies, all the steps necessary to successfully start the electrification of a corporate fleet, exploring key issues such as costs, benefits, and charging infrastructure in the company. During this meeting, the updated guide created by Motus-E will be presented, designed to answer all the questions fleet managers may have in the transition to electric mobility.

## Preparing for the future: the skills needed to work and do business in the new mobility landscape

Organized by Motus-E, Network of schools for sustainable mobility

The transition to new mobility, between digitalization and new engines, requires new skills and appropriately trained professionals. In a rapidly evolving context, illustrated by experts from the energy and automotive worlds, the panel will explore which profiles will be most in demand by the industry in the coming years and how to orient training and study paths to prepare professors and students to face the greatest technological transformation in the history of the automotive industry.

### Technologies for aggregating electric vehicle charging: Italian excellence

Organized by RSE SpA

Starting July 1, 2026, only charging infrastructure with a Charging Infrastructure Controller (CIR) will remain on the list of devices prepared by the GSE for access to any subsidies. The CIR project aims to promote integration between electric vehicles and the power grid, implementing the so-called "vehicle to grid" paradigm. In this context, the interaction between electric vehicles and the electricity system must allow vehicles to provide, through charging infrastructure, reserve and balancing services to the grid, as well as actions to resolve congestion and additional services, including primary and secondary frequency and voltage regulation, where technically feasible.

The aim of the conference is therefore to highlight this technological opportunity to provide flexibility to the grid, security to the system, and simplify charging for users, with a view to maximum collaboration between institutions, research bodies, and Italian and foreign charging infrastructure manufacturers.



#### <u>EFFY – Energy Efficiency Expo</u>

## Energy efficiency in public housing: what is the current status of the 1.3 billion euros in PNRR funds allocated?

Organized by Coordinamento Free, AssoESCo, FIRE

The National Recovery and Resilience Plan (PNRR) has allocated €1.3 billion to improving the energy efficiency of public housing, with the aim of improving living standards, reducing energy consumption, and contributing to the country's ecological transition. With just a few months to go before the measure expires, it is essential to assess its implementation status.

The conference aims to provide an opportunity for discussion between institutions, industry operators, local authorities, and stakeholders in the supply chain, to analyze the critical issues encountered in the implementation of the projects and evaluate the effectiveness of the tools made available. Particular attention will be paid to any corrective measures that may be necessary to accelerate the spending of funds, ensure the quality of interventions, and maximize environmental and social benefits, also in view of a potential post-PNRR refinancing.

The meeting therefore represents an opportunity to take stock of the progress made and to outline, with the contribution of the main actors involved, the future prospects of a sector that is relevant to the achievement of national and European decarbonization and sustainability objectives.

#### Finance for energy efficiency: tools for ESCOs

Organized by FEDERESCO

The conference addresses the main challenges and opportunities related to financing the energy transition in Italy. The latest legislative proposals in support of Energy Service Companies will be explored, the relevant regulations will be analyzed, and the financial and guarantee instruments available to promote the adoption of innovative solutions in the energy sector will be examined in depth. Particular attention will be paid to the measures of the PNRR (National Recovery and Resilience Plan), in particular measure M.7 - I.17, aimed at promoting the energy regeneration of the ERP (Public Real Estate) heritage, highlighting its potential to improve the energy efficiency of public residential buildings through strategic interventions and targeted financing.

A number of ESCOs will be involved in a 360-degree discussion with institutions and stakeholders to promote an integrated dialogue on the challenges and opportunities in the field of energy efficiency. Additional contributions from experts in public finance, financial instruments, and ERP asset management will complete the strategic vision for accelerating the energy transition in the public sector.

### **Energy efficiency in small businesses: problems and possible solutions**

Organized by Coordinamento FREE, Confartigianato, CNA, FIRE

Small and medium-sized enterprises are the backbone of Italy's productive fabric, but they often struggle to adopt structured energy efficiency policies. A lack of in-house technical expertise, limited availability of dedicated personnel, and difficulties related to investment costs are among the main obstacles that lead to significant opportunities for economic and energy savings being overlooked.

The conference aims to analyze in detail the most common critical issues in SMEs, and in particular in small businesses, with regard to their capacity for energy efficiency, identifying the causes of this limited attention and highlighting the consequences in terms of competitiveness and sustainability. At the same time, possible solutions will be explored, from technical and training support to financial and tax incentives, to models of collaboration with external entities that can support businesses—together with trade associations—in their path toward energy efficiency and transition.

The initiative aims to encourage dialogue between institutions, trade associations, industry experts, and entrepreneurs, with the goal of identifying concrete and replicable tools that will enable even small manufacturers to reap the benefits of energy efficiency in terms of competitiveness.

### Artificial intelligence applied to energy efficiency

Organized by FIRE

The workshop will be an opportunity to illustrate the options currently available for using AI for energy management and recent developments. FIRE will also present the results of the study carried out in 2025 on AI applied to the energy sector. The presentations will provide an overview of the current situation and future developments in applications useful for improving energy use in businesses and institutions.

An event designed for energy managers, EGE, utilities, ESCOs, and other stakeholders involved in energy management, decarbonization, and sustainability.

### Measurement and verification of energy savings

Organized by FIRE

Measurement and verification (M&V) is the fundamental tool for objectively quantifying the results of energy efficiency measures, emissions reduction, and more rational use of resources.

Whether for buildings, industrial plants, or service infrastructure—for a single self-financed intervention or complex programs included in energy performance contracts (EPCs) or third-party financing formulas—M&V allows you to demonstrate energy savings and emissions reductions with transparency and credibility, evaluate the actual effectiveness of interventions compared to initial estimates, optimize every phase of the project, from design to operational management, and reduce the risks associated with lower-than-expected performance.

Discover how M&V can support you in achieving your sustainability and energy efficiency goals.

### **Energy accounting for businesses and organizations**

Organized by FIRE

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Discover how M&V can support you in achieving your sustainability and energy efficiency goals.

## Measures and mechanisms for the post-PNRR energy transition: the role of Energy Service Companies

Organized by AssoESCo

Starting with an assessment of the measures supporting the energy transition related to the PNRR, we will analyze the future challenges for our country. Which tools have worked? Which measures need to be corrected and why should they be refinanced? How can Energy Service Companies play a role in accelerating the post-PNRR transition process? The conference will open with an introductory analytical report and will include a round table discussion with institutional stakeholders.

### White certificates: new developments for targets and rules

Organized by FIRE

The traditional event organized by FIRE in collaboration with Key is back, illustrating the results achieved, the tools activated by the GSE to support operators, and the latest developments, with a view to encouraging operators to participate in the scheme. The conference is aimed at organizations in the industrial, tertiary, agricultural, and transport sectors. The main target audience is ESCOs, energy service companies, companies that produce energy efficiency technologies, organizations with energy managers, and electricity and natural gas distributors.

## "Energy audits": obligations and incentives for companies with high electricity and gas consumption

Organized by ENEA

Presentation of analyses and results of energy audits carried out by energy-intensive and gas-intensive companies, relating to the 2024-25 deadlines, also in light of the changes introduced from 2025, which concern the updating of consumption thresholds that determine the obligation to carry out diagnostics and the introduction of new requirements for access to subsidies, with a focus on energy efficiency and emissions reduction.

#### Report on the state of energy sustainability in the construction supply chain

Organized by KEY - The Energy Transition Expo and FEDERCOSTRUZIONI

The report will focus on the state of sustainability in the supply chain, including a critical and comparative analysis with the main reference tools and guidelines (LCA, new EPBD, CAM, ESG/CSRD). The document will include sections dedicated to the European and national context, analysis by sector, aggregate indicators, and a reflection on the transition trajectories of the supply chain.



#### **SUSTAINABLE CITY**

### Next Generation AI for a carbon-free built environment

Organized by KEY - The Energy Transition Expo

Following on from last year's successful event, this year's event aims to showcase the latest innovations and projects related to the use of Artificial Intelligence (AI) for the decarbonization of the built environment. International experts in the field will come together to discuss the potential of AI in this sector and its impact on both industry and civil society.

#### **Zero-emission centers and logistics**

Organized by GBC and KEY - The Energy Transition Expo

The transition to an increasingly digitized society in terms of services and consumption will see significant development of data centers and logistics hubs, buildings with a high energy footprint, over the next decade. What design strategies for zero-emission buildings and positive energy balance can mitigate the impact? What technological solutions can be implemented at the building and district level? What is the role of public administration in regulating and planning new developments?

#### PUBLIC LIGHTING: new prospects following the introduction of second-generation meters

A cura di ENEA

New milestones on the horizon for the real-time monitoring, acquisition, management, and evaluation of consumption data from public lighting systems. The new functionality of the new generation meter allows the hourly electricity consumption data of a system to be communicated, even to the end user, thanks to a direct reading from the POD. The end user is therefore given the opportunity to monitor their consumption in real time and draw appropriate conclusions about the operation of the system.

ENEA's PELL Project, in its construction of a static and dynamic snapshot of public lighting systems, is ready to adapt its method of reading system consumption to the Chain2 communication protocol supported by new generation meters. The large-scale adoption of the Chain2 protocol will enable more accurate and widespread data acquisition.

### Synergy between Networks and Buildings in the Decarbonization Process

Organized by GBC, ENEA and KEY Technical and Scientific Committee

In order to accelerate the decarbonization of the built environment, analyze the reduction in building energy requirements, the increase in the efficiency of energy-intensive systems installed within buildings, and renewable energy production systems, considering scenarios for the decarbonization of energy generation and distribution.

### The development of Renewable Energy Communities (REC) in schools

Organized by RSE SpA

Energy communities are a tool that encourages local actors to get involved in the ongoing energy transition. Schools are, by their very nature, an ideal habitat for their development: they have an active community (students, teaching staff, parents), they have spaces suitable for the installation of photovoltaic systems, and they also play an educational role on issues of active citizenship.

During 2024, RSE mapped a number of case studies that can be taken as examples for the dissemination of these initiatives and produced some dedicated guidelines.

The conference aims to present these results and stimulate debate among institutions for the further development of these initiatives.

#### Legambiente's renewable and solidaritybased energy communities: focus on BeComE, the campaign in small municipalities carried out with Kyoto Club and AzzeroCO2

Organized by Legambiente, Kyoto Club

A few weeks before the latest deadline set by the GSE for small municipalities and those with up to 50,000 inhabitants to obtain the funds provided for in the PNRR, the best practices of the BeComE project by Legambiente and Kyoto Club with AzzeroCO2 will be presented, and the total number of CERs in Italy will be assessed, which is likely to be even lower than expected due to excessive bureaucratic obstacles.

Are CERs a missed opportunity or a seed that will grow anyway in the ongoing energy revolution?

## ENEA for new energy strategies and economic and social development models: Energy Communities

Organized by ENEA

Renewable Energy Communities (RECs) are a key element in a fair energy transition, as they combine the social dimension with the spread of renewable energy. This is not just a paradigm shift in energy production and use, but a model that puts people at the center, promoting participation, sharing, and widespread benefits.

In order for RECs to establish themselves in the Italian energy landscape, it is essential to raise awareness of their value and the role that citizens, businesses, and local authorities can play in driving the transformation of the energy system. To this end, the Observatory, as part of its thematic working groups dedicated to the entire CER process, examines various multidisciplinary aspects and regulatory developments and provides an opportunity for discussion and collaboration between stakeholders in a context that is establishing itself but still raises some questions and uncertainties.

### Smart lighting negli edifici: opportunità e scenari

Oeganized by: AIDI

Smart lighting is a very important strategic driver for energy transition and urban regeneration in Italy, strengthening the role of the lighting sector as a leader in sustainability and innovation. This is because, in addition to efficiency and energy savings, which are very important effects of its application, smart lighting offers other benefits in terms of visual comfort and well-being. In fact, when applied correctly, dynamic lighting can achieve the right balance and integration with natural light, with the aim of not altering the biological clock that regulates sleep and wakefulness, with obvious repercussions on the well-being and health of individuals.

### Lighting for the protection and enhancement of cultural heritage

Oeganized by: AIDI

Light, thanks in part to new technologies, plays a fundamental role in the enjoyment and preservation of cultural heritage. In fact, adequate lighting allows visitors to fully appreciate artistic and architectural heritage, and this aspect is essential for the correct perception of the shapes and colors of works, both indoors and outdoors. On the other hand, as is well known, light radiation can cause damage and deterioration, especially in the presence of sensitive materials or specific microclimatic conditions. Today's challenge is to create lighting environments, including dynamic ones, that balance exhibition and conservation needs, thanks in part to collaboration with experts from various disciplines.

### Inclusive lighting for the well-being of all citizens

Organized by AIDI

Inclusive lighting and the well-being of all are two closely related concepts because adequately lighting spaces to meet the needs of certain vulnerable groups means creating lighting conditions that take into account different needs and are suitable for the widest possible range of people. It is therefore necessary to change the cultural approach at all levels, considering that diversity among individuals is an opportunity for everyone, both in private and public spaces. In particular, when it comes to cities, a better understanding of the needs of all citizens helps to create well-designed and well-lit urban spaces with a positive social impact.

#### The new frontiers of urban lighting

Organized by AIDI

New technologies are changing the face of cities and their socio-cultural paradigms, initiating a process of transition towards ever greater innovation and sustainability that requires new management and energy models to be found. In this context, the use of photovoltaics integrated into electric lighting systems is also growing. While offering economic savings and environmental benefits, these systems must take into account conflicting aspects, such as barriers to initial investment and return on investment times, which are also linked to the variable availability of solar radiation. The debate is open, with the aim of carefully evaluating innovations aimed at finding solutions for lighting that is sustainable from all points of view.

### Lighting in parks and natural environments

Organized by: AIDI

The lighting of parks and gardens allows citizens to be in contact with nature even during the evening hours, but at the same time it must respect the biological cycles of the entire ecosystem, balancing aesthetics, reduced environmental impact, and safety. Current technologies and proper design allow for the rational use of lighting suited to specific landscape contexts and aimed at establishing a healthy relationship between humans and nature.



#### **CROSS-CUTTING TOPICS**

### New tools to support the development of renewables

Organized by GSE

# CHECKMATE TO RENEWABLES 2026. Renewables, territories and communities: from opposition to opportunities

Organized by Legambiente

Continua la crescita delle fonti rinnovabili nel nostro Paese. Tanti i progetti che vengono presentati e realizzati, ma ancora troppe le lentezze burocratiche e le opposizioni che nascono nei territori tra fake news e narrazioni errate. Di fronte a noi obiettivi chiari e raggiungibili per l'Italia, obiettivi in grado di portare vantaggi diretti e indiretti nei territori. Quali gli ostacoli ancora da superare alla luce delle nuove normative? Come superare gli ostacoli nei territori? Qual è il valore delle comunità? La presentazione del nuovo Rapporto Scacco Matto alle Rinnovabili sarà ancora una volta l'occasione per fare il punto sullo sviluppo delle rinnovabili nel nostro Paese, ma anche di discutere con gli stakeholders dei limiti e degli ostacoli che ancora condizionano la realizzabilità dei progetti, mettendo al centro proposte e soluzioni in grado di accelerare la transizione energetica.

### Is there a future for new nuclear reactors in Italy?

Organized by KEY Technical Scientific Committee

The government has launched a process to revive nuclear energy in Italy, focusing on small modular reactor (SMR) technologies. The plan includes support for research, simplification of authorizations, and the goal of integrating nuclear power with renewables to achieve decarbonization. A draft enabling law has been approved and €7.5 million has been allocated for information campaigns on nuclear power between 2025 and 2026. While the nuclear scenarios are being defined, renewables continue to grow, with an increase of 4 GW between January and August 2025.

The debate will serve to compare different points of view on Italian energy scenarios.

#### Hydroelectric: a sector with great potential

Organized by ANIE

Hydroelectric power generation is a cornerstone of renewable energy production in Italy's energy mix. In 2024, hydroelectric power generated 52 TWh, covering 40% of renewable energy generation and 17% of national energy generation, with production that is largely programmable and, for the remainder, at least predictable, with obvious consequences for grid stability. Estimates of investment in the hydroelectric sector in Italy vary, but indicate a significant need for the renovation and modernization of plants, with figures ranging from €5.5 to €15 billion for renovation and another €3.4 billion for new mini-plants that enhance the energy value of existing hydraulic works such as dams, weirs, and irrigation networks in general, as well as potential development with larger plants on less exploited rivers or low heads. One of the objectives is to improve the efficiency and power of existing plants, which in many cases are of advanced age. Investments are being blocked by uncertainty over the renewal of concessions, the non-application of the new provision on prevailing public interest in accordance with RED III, the high cost of BIM fees and surcharges, and the additional obstacle of SNPA compliance for access to the economic support mechanisms of FER X. The conference aims to explore these issues in order to unlock investment in a sector that can increase its contribution to national energy security and reduce energy costs, as well as stimulate the entire industrial chain linked to the maintenance of large plants.

#### The potential of industrial flexibility

Organized by Smart-EN

The growing variability in electricity generation from renewable sources, combined with regulatory and market pressure towards decarbonization and efficiency, makes industrial flexibility a strategic resource for the energy system. This presentation explores the technical, economic, and regulatory dimensions of flexibility in the industrial sector: demand management strategies, storage systems, modular production, load shifting, automation, and digitization. National and international case studies, effective remuneration models, existing barriers (risk management, initial investments, regulations) and proposals for incentive policies will be presented. The aim is to outline how energy-intensive industries can become not only consumers but also active supporters of grid stability, helping to reduce energy costs, improve resilience, and accelerate the transition to a more sustainable system, while increasing their own competitiveness.

### Demand response aggregators: business models and opportunities

Organized by Smart-EN

Demand response (DR) aggregators are emerging as key players in connecting flexibility providers—whether industrial customers, SMEs, energy communities, or prosumers—with the needs of the electricity system: balancing, peak management, ancillary services, and cost efficiency.

This conference aims to present and analyze the main business models for DR aggregators, both as independent players and as integrated services to suppliers. The regulatory and market framework in Italy and Europe will be discussed, as well as operational challenges—such as demand forecasting, remote control, and customer segmentation—and business opportunities: new sources of income and technological development. Finally, recommendations will be made to promote the establishment of aggregators as an integral part of the energy transition, enhancing investments and ensuring benefits for the system, businesses, and consumers.

### The balance of the Italian electrical system in the new demand-supply scenario

Organized by Althesys

The evolution of the Italian electricity system must combine the objectives of adequacy and security on the one hand and decarbonization, with the development of renewables and energy efficiency, on the other. Therefore, the entire generation, storage, and grid system must be considered in light of the 2030 targets, combining environmental and economic sustainability. In a context where electricity demand remains weak and the electrification process is struggling, investments in renewables risk finding increasingly unfavorable market conditions for growth. Support policies remain crucial, both to achieve ever-increasing shares of renewables and to have flexible capacity and storage available. Operators and investors are facing new scenarios of uncertainty, with growing risks of cannibalization of renewables and the prospect of negative prices in Italy as well.

The design of the system must therefore aim to combine decarbonization objectives with balance, security, and affordability for all stakeholders: producers, consumers, investors, and infrastructure operators.

## Multiple financing instruments need to be scaled up to accelerate Africa's energy future and to improve energy access

Organized by Res4Africa

Recent crises have made it increasingly challenging for many African countries to raise financing to support their clean energy ambitions, despite the continent's huge needs. Africa accounts for around 20% of the world's population but attracts less than 2% of its spending on clean energy. En- ergy investment in Africa has been falling in recent years. Spending on fossil fuels – which has typically accounted for around two-thirds of in- vestment – has declined and clean energy investment has remained flat. Africa is facing a variety of energy challenges. Managing the transition to a low-carbon economy and achieving sustainable development on the continent require a balanced mix of innovative solutions, including large- scale projects, distributed generation and interventions to strengthen the transmission grid. Electrifying Africa requires a systemic thinking that embraces all the components of the electricity system and its value chains. Renewable technologies offer significant benefits in terms of job creation, energy security, climate change mitigation and adaptation, food and water production, poverty reduction and business creation. This requires a step change in investment, requiring opening up a range of new capital sources and financing approaches. Making capital more affordable can unlock sig- nificant development across Africa, despite ample resources and favourable underlying economics, multiple barriers hinder the development of bank- able clean energy opportunities in Africa and deter private investments in projects and companies at the necessary scale.

Scaling up and replicating existing innovative financing solutions requires a coordinated approach from African governments, development finance institutions, donors and private capital.

The panel focuses on the multiple financing instruments in Africa need to be scaled up to accelerate Africa's energy future and to improve energy access, with the necessary investments to ensure that everyone has access to reliable, affordable and sustainable electricity.

## Good news, bad news, fake news: from energy transition to cultural transition, what role does information play?

Organized by Italy for Climate

Information is playing an increasingly important role in progress towards decarbonization. In many cases, unfortunately, it acts as a brake rather than a lever for energy transition. This transition is not only technological or economic, but also deeply cultural. Renewables and electrification are at the center of an extremely polarized debate, in which individuals are often pushed to accept one truth or another not on the basis of credible data and information, but rather out of a sense of belonging to one of the sides in the debate.

The event will be an opportunity to address some of the main false myths circulating today in new and traditional media and to understand, through an open discussion between various experts from the world of information and energy transition, what the antidotes might be to the virus of misinformation that has infected public debate. The event will not only target journalists and energy sector operators, but will also seek to be as open and inclusive as possible, because cultural transformation will only be possible by opening the doors to the rest of civil society. For this reason, the event will also be an opportunity to present a pilot initiative carried out in some secondary schools in Emilia Romagna to educate students about good information on energy transition (and more).

### Accelerating the transition, unlocking the future

Organized by Elettricità Futura

Regulations, supply chains, and people to translate  $\epsilon$ 100 billion in investments into action

The energy transition is key to strengthening energy security, competitiveness, and decarbonization at the same time. Electrification from renewable sources is a cornerstone of this transition, but it must be accompanied by a balanced mix that includes natural gas as a source of flexibility and security, along with networks and storage systems. Today, renewables represent an available solution and an industrial driver for the country: they could mobilize up to €100 billion in investments by 2027, generating an impact on GDP of around €85 billion and tens of thousands of new skilled jobs. However, to transform this potential into concrete results, it is necessary to reduce administrative complexity, ensure regulatory certainty, and develop effective and efficient market mechanisms. The results of the transitional FERX, MACSE, and Energy Release suggest that medium- to long-term negotiation can transfer the benefits of the transition to the industrial supply chain and the national production system. If properly implemented, these mechanisms could enable the 150 GW of renewable energy plants to be "unlocked" in Italy, generating competitive and stable prices for businesses and consumers. This would encourage new investments in renewable energy capacity, repowering operations, flexible and programmable production capacity, and storage systems.

Transmission and distribution networks are the enabling infrastructure for this safe and competitive transition process. In this regard, too, it is essential to accelerate investment by defining a regulatory framework that provides certainty to the operators required to make these investments, with the aim of making the national electricity grid more secure, resilient, and interconnected. No less important is human capital and its training and reskilling in view of the evolution of market mechanisms and technologies that require ever greater technical and digital skills. The Elettricità Futura event will be an opportunity to discuss with institutions and stakeholders in the national electricity sector the "lessons"

institutions and stakeholders in the national electricity sector the "lessons learned" from the new market mechanisms and to gather ideas on concrete solutions that can translate the energy transition into works, growth, and security for the country.

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#### Global challenges, sustainable solutions: Europe in transition

Organized by ECCO

In an international context characterized by deep geopolitical tensions and a race to develop transition technologies, the competitiveness of European companies represents a crucial challenge for the future of the European Union. The United States, with its aggressive trade policies, and China, with its innovation-driven growth model, are reshaping the global economic balance.

Europe risks being crushed between two powers that do not hesitate to use trade and technology as strategic levers of influence. The panel proposed by ECCO at Key Energy 2026 aims to offer a high-level reflection on the strategies needed to strengthen European industrial leadership while ensuring energy and technological security. Through the contribution of experts, institutional representatives, and businesses, the debate will focus on risks and opportunities, proposing concrete tools to build resilient supply chains, promote innovation, and ensure that the green transition remains an engine of growth and not a brake on competitiveness.

### European industrial policy and the role of innovative technologies

Organized by Cleantech for Italy

Europe faces a crucial choice: continue to defend an industrial model built in the last century or reinvent it to lead the current one. Clean technologies are no longer just a matter of decarbonization, but are key to producing energy at competitive costs, reviving manufacturing, and building new economic security. The event will bring together scientists, entrepreneurs, industry leaders, and institutions to identify concrete solutions: how to accelerate the technological transition, how to finance new European industry, how to support demand for clean energy and transform it into real growth.

A high-level discussion to define the priorities of a European industrial policy based on innovation, productivity, and technological leadership. The focus will be on virtuous examples of public policy, projects, and partnerships capable of generating measurable impacts on industry, growth, and employment, and Italy's place in the context of the European Clean Industrial Deal will be discussed.

#### Energy and Innovation: MASE's International Cooperation for Energy Transition

Organized by MASE, Ministry of the Environment and Energy Security

MASE's international cooperation on energy issues focuses on three main drivers:

- -Technological innovation on energy issues with Mission Innovation, which combines a national dimension (on flexibility, storage, data/digitalization, hydrogen) and an international dimension implemented with UNDP Rome Center, through the Energy4Growth Initiative, in synergy with the Mattei Plan and Global Gateway, on priority countries in Africa, Brazil, and the Mediterranean.
- -Digitization of energy systems and flexibility with 3DEN, which supports technological, regulatory, and policy innovations to accelerate digital transformation, enable demand-side management, interoperability, and integration of renewables in partner countries. Phase II extends the scope to Brazil and seven African countries (18 proposals have been selected between phase I and phase II to date, with broad Italian participation 26 Italian entities including companies, research centers, universities, and engineering firms).
- -Sustainable cooling with EPIC Deploy (Cool Coalition/UNEP), which translates the Global Cooling Pledge into delivery through multicountry assessments, calls for proposals, and pilots on the tertiary sector and cold chains to demonstrate measurable impact, market transformation, and replicability.

### Women for energy: the role of renewables in the global competitiveness

Organized by KEY Technical and Scientific Committee

Renewable energy enhances Mediterranean countries' competitiveness by offering abundant local resources, reducing reliance on imported fossil fuels, and creating new economic opportunities in manufacturing and job creation. Key benefits include lower energy costs, improved energy security, and potential for becoming energy exporters, especially in solar and wind power, though a strong effort is needed in order to fully realize the potential infrastructure development.

### Presentation of the "Green Paper on Energy Transition"

Organized by Coordinamento FREE

The decarbonization process requires constant monitoring of the objectives and actions undertaken at the national level to achieve the targets set. With this in mind, the Green Paper on Energy Transition is intended as a tool for synthesis and analysis, providing an annual update on the progress of the transition, with a particular focus on the Italian context. The conference will present the first edition of the Green Paper, which will contain the main international decarbonization trends and, in relation to the national context, will refer to the targets set by the PNIEC for 2030, assessing the level of alignment with the objectives of the various sectors: renewable electricity and heat, energy efficiency, and transport. The aim is to provide a clear and immediate overview of the progress made each year, accompanied by policy recommendations to support the achievement of the targets and strengthen Italy's role in the global energy transition. The volume will also contain an analysis of the prerequisites necessary to achieve a 100% renewable energy scenario by 2050, with particular attention to technological aspects.

Produced with the contribution of most Italian associations active in the fields of energy efficiency, renewables, and environmental sustainability, the Green Paper on Energy Transition aims to become an annual reference point for analyzing the state of transition in Italy and a shared tool for reflection, monitoring, and guiding future policies.

### The role of industry in the energy transition

Organized by RSE SpA

The energy transition is one of the main challenges of our time, and the industrial sector plays a leading role in it, both in terms of its energy consumption and its potential for innovation and transformation. The conference aims to explore the concrete contribution of industry to decarbonization and energy efficiency, analyzing the strategic role of digitalization, the visions of companies, the supply chains for the transition, and the operational responses implemented by the productive fabric.

## Towards a Circular Economy for Solar and Energy Storage: Strategies and Innovations in PV and Battery Recycling

Organized by ETA-Florence - in cooperation with Ecomondo

<sup>\*</sup>This program is subject to change in terms of titles, abstracts, and organizers.