KEY – THE ENERGY TRANSITION EXPO 2027

10–12 March 2027
Draft Programme Overview – Programme under development and subject to change

LEGEND

- OPENING
- SOLARTECH
- SEC – SOLAR EXHIBITION CONFERENCE
- ENERGY TRANSITION
- WEM – WIND EXPO FOR MED
- SU.PORT – SUSTAINABLE PORTS
- SUSTAINABLE CITY
- KSE - KEY STORAGE
- EFFI – ENERGY EFFICIENCY EXPO
- HYPE – HYDROGEN POWER EXPO
- EME – EMOBILITY EXPO
- CROSS-CUTTING TOPICS

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Opening

Opening Ceremony

Organised by CTS KEY

Opening event of the 20th 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.

Italy 2050: the choices we make today that shape our energy future

Organised by Energy Square

What decisions must we make today to build Italy's energy system for 2050?

A discussion bringing together institutions, industry and experts on energy scenarios for 2030, 2040 and 2050: the evolution of demand and electrification; the role of renewables, gas, new energy molecules and nuclear power; the overall costs of different configurations; and the investment needed in grids, storage and infrastructure.

The focus will be on the choices that will shape the country's energy future from today onwards, assessing their implications for security of supply, industrial competitiveness and strategic autonomy, including in light of technological innovation and changing costs.

SolarTech

SolarTech 2027 - Technology, digitalisation and sustainability for the future of photovoltaics

Organised by Italia Solare

In 2027, ForumTech evolves into SolarTech, with a redesigned format intended to provide a more integrated view of the main technological developments in photovoltaics. The main organisational change is the replacement of the parallel afternoon sessions: the entire day will take place as a single plenary session.

The preliminary programme comprises four sessions, two in the morning and two in the afternoon, covering components, distributed installations, large-scale plants, cybersecurity and artificial intelligence applications for the photovoltaic sector.

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Checkmate to Renewables

Organised by Legambiente

Checkmate to Renewables is Legambiente's report providing a detailed account of the obstacles to renewable energy development: regulatory barriers and delays, opposition from regional and municipal authorities, and resistance within local communities. These are often compounded by fake news, which certainly does not make it easier to build plants or deliver the positive benefits they can bring to local areas.

In addition to examining the reasons for these delays, Legambiente's report will analyse the 2030 decarbonisation targets, highlighting the situation region by region, delays in installations, and the areas making the greatest progress, both in deployment volumes and regional regulations.

Photovoltaic plants in the age of extreme weather events

Organised by Ricerca sul Sistema Energetico - RSE SpA

The increasing frequency and intensity of extreme weather events in recent years is creating new challenges for the photovoltaic sector, affecting not only plant energy yield but also long-term reliability, safety, durability and economic sustainability. Hailstorms, heatwaves, extreme wind events, floods, fires and other abnormal phenomena can damage plant components, sometimes irreversibly, resulting in production losses. The session will offer a multidisciplinary perspective through presentations analysing the effects of extreme weather on photovoltaic plants. Case studies and evidence from experimental data will be presented. Particular attention will also be paid to mitigation strategies available today for more proactive climate risk management. The session will explore possible implications for the evolution of technical standards, with the aim of identifying approaches that can increase the robustness and resilience of photovoltaic plants throughout their life cycle.

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AI-Voltaics: AI supporting agricultural yields, governance and energy performance

Organised by AIAS

Integrating artificial intelligence into agriculture now makes it possible to monitor environmental and production conditions in real time, optimising the use of resources such as water, fertilisers and plant protection products. The aim is to improve production efficiency and reduce environmental impact. However, greater use of AI in the sector can also drive other essential outcomes. Production monitoring, with real-time corrective action enabled by AI's ability to combine data rapidly, can help achieve a more balanced relationship between the parties: as is well known, one party's responsibilities for gross saleable agricultural output can have adverse consequences for both participants in the configuration.

Public authorities can also benefit when checking compliance with permit requirements, by automatically verifying that the underlying authorisation and production conditions remain in place. AI also offers benefits for PPA pricing: optimisation algorithms support strike-price setting and reduce the risk of production being concentrated in hours with low, zero or even negative prices. The latter triggers suspension of incentive payments under Ministerial Decree 436/2023, without any compensation for curtailment, unlike other incentive mechanisms.

Electro-thermal energy storage: from heat to value. Technologies and opportunities for the energy transition

Organised by ENEA

The growing deployment of renewable energy and the electrification of energy use in Europe make the development of storage systems that ensure flexibility, security and resilience increasingly strategic. In this context, Electro-Thermal Energy Storage (ETES) systems are among the most promising Long Duration Energy Storage (LDES) technologies, thanks to materials with limited dependence on critical supply chains, a long service life and competitive costs. By converting electricity into thermal energy, ETES systems store renewable energy and put it to use as process heat or, when needed, convert it back into electricity to support users and the grid. This promotes integration between different energy carriers and the progressive electrification of industrial processes.

The event will provide an overview of ETES technology development, illustrating the main plant configurations, pilot experiences and industrial deployment prospects. It will present the most promising applications, from decarbonising industrial heat to replacing natural gas and providing long-duration energy storage, showing how ETES can turn renewable energy into value through new Energy-as-a-Service models and flexibility services for industrial processes and the grid.

A specific focus will address economics and business opportunities for ESCOs, utilities, plant developers and energy-intensive companies, particularly in hard-to-abate sectors. It will highlight how ETES can turn surplus renewable generation into economic value, strengthening competitiveness and accelerating decarbonisation.

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Through discussion between researchers, industry and sector operators, the workshop will highlight the role of ETES in integrating electricity and heat systems. This technology can turn heat into a strategic resource that creates value for industry, supports energy system flexibility, enables new business models and strengthens the competitiveness of Italian manufacturing in the new European energy landscape.

Agrivoltaics summit: field experience, bankability and the regulatory framework

Organised by Agrivoltaica ETS

The conference will explore agrivoltaic development through real case studies, comparing experience, results and challenges in the design, construction and management of plants and agricultural activities. Drawing on these experiences, the discussion will address the conditions for project bankability and the regulatory and permitting aspects affecting implementation, with contributions from operators, financial institutions, public bodies and trade associations.

The ENEA and Kyoto Club observatory on the challenges of managing and developing renewable energy communities

Organised by ENEA, Kyoto

Renewable Energy Communities (RECs) represent an innovative model of energy production and sharing that challenges institutions, operators and citizens to recognise the need for more sustainable lifestyles and a more proactive role in achieving energy transition goals.
The ENEA and Kyoto Club observatory offers an opportunity to meet and discuss the present and future of energy communities, sharing and rethinking strategies for promoting, developing and managing RECs, so that this innovative model becomes an attractive goal with strong participatory and social value, rather than a challenge.
Good management and development practices, noteworthy experiences in small villages and wider areas, new regulatory developments, operators' needs and guidance for policymakers: these topics will be addressed to assess new pathways and support and revitalise energy communities.

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Prospects for Renewable Energy Communities: Diversity of Models, Integration into the Energy System and Post-2027 Development Scenarios

Organised by RSE and ART-ER

The first phase of implementation of Ministerial Decree No. 414/2023 will come to an end on 31 December 2027. Regional data reveal a rapidly expanding yet highly heterogeneous landscape: Renewable Energy Communities (RECs) are evolving along different pathways, ranging from initiatives with a strong civic and social focus to more business-oriented models. This diversity highlights the fact that no one-size-fits-all approach is possible and raises a key question: what tools and support mechanisms will the sector need to achieve long-term consolidation beyond 2027?
The conference will examine the current state of REC deployment and the uptake of support and incentive schemes, with a view to identifying tools for assessing their socio-economic and environmental impacts, as well as their contribution to innovation. Recognising the diversity of REC models and their respective impacts provides an essential knowledge base for designing future support measures, enhancing the value of local specificities and helping communities move towards the full integration of services that benefit citizens and local areas.
The discussion will bring together institutional stakeholders, representatives of businesses and consumers, and organisations providing financing to Renewable Energy Communities.

Energy Transition

Investing in electricity for growth and energy independence

Organised by Elettricità Futura

Italy consumes more electricity than it produces: around 16% is imported from neighbouring countries. Electricity demand will grow in the coming years, driven by electrification and data centres. Italy must seize this opportunity to strengthen energy security and reduce imports, which expose households and businesses to geopolitical and climate shocks and price volatility. Reducing import dependence requires two approaches. The first is to increase domestic renewable generation alongside storage and grid development. The second is decoupling through long-term contracts for businesses and households, bringing the benefits of lower renewable energy costs directly to their bills. The electricity sector is ready to invest a further €200 billion over the next ten years. It is asking for enabling conditions, rather than funding: rapid permitting, stable rules, fully operational Capacity Market and MACSE mechanisms, and long-term contracts accessible to everyone, with FER X fully implemented today, FER Z tomorrow, and a publicly guaranteed PPA platform opening the market to SMEs and households. Electricity can become a pillar of Italy's economic growth and energy independence.

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Demand-side flexibility serving the grid: from trials to coordinated markets

Organised by smartEn e FlexIT

Growing renewable energy deployment and electrification make tools for efficient and secure grid management increasingly important. In this context, demand-side flexibility is a fundamental resource to help the transmission system operator and distribution system operators prevent and manage local congestion.

The event will bring together demand-side flexibility market participants, Terna and Italy's main distribution system operators to share experience gained in recent years through trials, pilot projects and operational applications. Drawing on results and lessons learned, participants will discuss how flexibility can improve coordination between transmission and distribution, increase electricity system efficiency and facilitate renewable energy integration.
The debate will also identify the main unresolved regulatory, technological and market challenges and outline the conditions needed for broader and more effective use of demand-side flexibility in grid services.

Demand-side flexibility pays: how to reduce bills and energy prices

Organised by smartEn e FlexIT

The energy transition is profoundly changing how the electricity system works. The event will analyse how consumers' active participation in electricity markets through dynamic tariffs, demand aggregation and Virtual Power Plants can deliver a dual benefit. It can help households and businesses optimise consumption and reduce bills by using hours when energy is structurally cheaper. It can also flatten demand peaks, limit reliance on more expensive marginal generation plants and thereby reduce wholesale energy prices, benefiting the entire electricity system.
The event will present evidence and analysis demonstrating the economic value of demand-side flexibility, comparing the experience of market operators in European countries where this is already possible. It will conclude with a discussion of the regulatory and market developments needed in Italy for demand-side flexibility to fulfil its potential and become a structural component of policies to reduce energy costs and improve national competitiveness.

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SMEs, competitiveness and the energy transition: which tools can accelerate investment?

Organised by AssoEsco

Small and medium-sized enterprises are the backbone of Italian manufacturing, yet continue to face significant difficulties in navigating the energy transition required by European targets and new competitive dynamics. The conference will begin with a study on the current state of the energy transition among Italian SMEs, highlighting key challenges, investment barriers and untapped opportunities. Institutions, business associations, sector operators and stakeholders will then discuss the effectiveness of the tools currently available to support decarbonisation across Italian industry. Which measures have delivered tangible results? Which need adjustment or renewed funding? How can Energy Service Companies help overcome the technical, financial and organisational barriers still holding back investment? The aim is to identify solutions and proposals that strengthen business competitiveness and accelerate progress towards national and European energy and climate targets.

Wem – Wind Expo For Med

Support mechanisms, grid connections and simpler permitting: key drivers for accelerating wind power development

Oragnised by ANEV

Achieving national and European decarbonisation targets requires a stable and effective framework that supports investment and accelerates the deployment of new wind capacity. The conference will analyse the main drivers of wind sector development: support mechanisms, grid access and simpler permitting procedures.

Particular attention will be paid to the evolution of support instruments, new connection rules and measures to address virtual grid saturation, as well as efforts to streamline and simplify permitting.

The discussion will examine legislative and regulatory developments, the main remaining challenges and the solutions needed to provide greater investment certainty and accelerate wind energy development in Italy.

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A new cycle for Italian wind power: repowering, revamping and offshore development

Organised by ANEV

Achieving the 2030 targets requires a new phase of wind power development in Italy that makes the most of existing assets while opening new growth prospects. The conference will analyse the two main strands of this process: repowering and revamping existing wind farms, and developing offshore wind.

The session will explore the permitting, environmental, technological and economic aspects of upgrading plants, alongside the conditions needed to turn Italy's offshore potential into new installed capacity, with particular attention to planning, connections, port infrastructure and the industrial supply chain.

Discussion between institutions, operators and supply chain representatives will identify the conditions needed to accelerate projects and make onshore renewal and offshore development two pillars of Italian wind power growth.

The new regulatory framework for offshore renewables: from FER2 to project delivery

Organised by AERO

Italy's regulatory framework for marine renewables is entering a crucial phase. The conference will review the status of the FER2 Decree, analysing the new regulatory framework, tariff mechanisms and implementation timelines for forthcoming capacity allocations. It will provide an essential forum for understanding investment prospects and the offshore wind project roadmap.

Ports and supply chains in the Mediterranean: infrastructure potential for offshore wind

Organised by AERO

Offshore wind development in Italy is closely dependent on onshore infrastructure. This panel will review structural port upgrades and the maturity of the domestic supply chain, including shipbuilding, logistics and manufacturing. The debate will focus on unlocking dedicated funding and strategies to turn ports into true marine energy industrial hubs.

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Sustainable City

Living in Class A: the right to affordable energy in the ecological transition

Organised by Legambiente and Kyoto Club

The right to live in highly energy-efficient homes concerns every citizen in Italy. Yet the country is behind schedule in transposing the EPBD and is still awaiting its Social Climate Plan, which provides significant resources to begin establishing structural tools for building renovation. Promoted by Legambiente and Kyoto Club, the event will offer a public forum bringing together institutions, political representatives, associations, organisations and social stakeholders to develop practical proposals for more efficient buildings, reducing consumption, emissions and energy bills. The energy transition must leave no one behind: it must begin with the most vulnerable households and individuals. Alongside its focus on tackling energy poverty and ensuring social justice in climate policy, the event will provide a strategic opportunity to assess Italy's progress towards the European energy efficiency and energy poverty objectives set within the EPBD and ETS2 frameworks.

The synergy between well-being and building efficiency

Organised by GBC Italia, CTS

Implementation of the new EPBD IV must consider energy performance calculation methods integrated with assessments of indoor conditions, in order to optimise building comfort and health.

Higher indoor environmental quality is often considered at odds with building efficiency. In fact, adopting techniques and strategies that work across disciplines can maximise both objectives.

The meeting will focus on approaches and solutions that can achieve this result.

Sustainability and energy across the construction supply chain

Organised by FEDERCOSTRUZIONI with support from Università Politecnica delle Marche, RSE

An event presenting the new report on energy sustainability across the construction industry supply chain. Based on an analysis of the energy efficiency work being undertaken by its different sectors, the report will include a critical comparison with the main reference tools and policy guidelines. It will also examine the potential impact of emerging technologies, identify the main barriers and reflect on energy transition pathways for the supply chain.

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Energy renovation of Italy's building stock: the gap between European targets and available tools

Organised by AssoESCo

Decarbonising the building stock is one of the main challenges of Italy's energy transition. Despite the European Union's ambitious targets, significant gaps remain between expected results and the regulatory, financial and operational tools currently available to households, businesses and public authorities. The conference will bring together institutions, sector operators, associations and stakeholders to discuss the barriers holding back energy efficiency investment and possible solutions to accelerate renovation. Particular attention will be paid to public buildings, focusing on Public-Private Partnerships and Energy Performance Contracts (EPCs), and to the private sector, which faces an increasingly demanding transformation. The aim is to identify practical tools, financing models and regulatory measures that can bridge the gap and make European energy efficiency and emissions reduction targets achievable.

A roadmap for decarbonising the existing built environment under EPBD IV

Organised by GBC Italia, CTS

The energy and ecological transition of the built environment requires long-term planning supported by a pathway with achievable milestones and feasible actions for different stakeholders. These roadmaps must be dynamic and updated as circumstances change and evidence emerges on the actual effectiveness of measures. Sharing experience from other contexts can therefore be valuable. Results achieved in other European countries can provide a reference for initiatives with a greater likelihood of success and less need for subsequent adjustment.

European innovation in digitalising the built environment: AI, energy and competitiveness

Organised by CTS KEY, ENEA (DUEE)

Event languages: Italian, English

In Europe, buildings account for approximately 40% of energy consumption, while 75% of the building stock still has low energy performance. At the same time, according to European Commission estimates, demand flexibility enabled by digital technologies could generate annual savings in electricity costs of more than €71 billion, highlighting the potential of digitalisation as a driver of energy, industrial and competitive development.

Through sensors, intelligent energy management systems, digital twins and artificial intelligence, buildings can evolve from passive consumers into active energy players, capable of optimising energy consumption, integrating renewable energy sources, improving occupant comfort and interacting with energy grids. In this context, the Smart Readiness Indicator (SRI), introduced under the European Energy Performance of Buildings Directive (EPBD), represents a strategic tool for assessing buildings' ability to adopt smart technologies and respond to the needs of both users and the energy system.
The conference will explore the opportunities offered by AI and digital innovation, presenting the results of the SRI pilot implementation in Italy and the prospects for its future application, also in light of European policies and the opportunities offered by the forthcoming Horizon Europe 2028–2034 programme, with the aim of promoting the widespread adoption of smart, interoperable and competitive solutions.

A new era for sustainable and affordable housing

Organised by Edera

How offsite construction and Modern Methods of Construction (MMC) can enable the environmental and social transition in Europe and Italy.

Zero-impact data centres: utopia or future reality?

Organised by GBC Italia, Federcostruzioni, CTS

Demand for AI-based computing power is accelerating worldwide. Exponential growth in energy demand, alongside consumption of other resources such as water and land in some cases, makes data centres one of the building categories considered to have the greatest impact.

However, their rapid expansion is accompanied by equally rapid innovation, with efficiency as one of its pillars. A substantial reduction in their impact is therefore possible.

As investor interest in green data centres grows, there is an increasing need for clear and consistent definitions of what green AI infrastructure actually means, supported by transparent data and credible benchmarks that protect communities, energy security and the environment. These topics are also central to recent work by Green Building Council Italia.

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Artificial Intelligence for energy efficiency

Organised by FIRE

The workshop will cover the options currently available for using AI in energy management, together with recent developments. The presentations will give participants an idea of the current situation and of future developments in applications that can help improve energy use in companies and organisations. A discussion with participants will follow to take stock of how AI is being used by companies and professionals, how this is changing the way people work, and with what results.

An event designed for energy managers, EGEs, utilities, ESCOs, professionals and other stakeholders involved in energy management and in the decarbonisation of consumption, as well as for AI technology providers.

Energy audits and the obligation and incentive mechanisms: state of the art and future prospects

Organised by ENEA (DUEE)

Since 2021, the energy audit has become a fundamental prerequisite for accessing the incentives available to companies with high electricity and natural gas consumption. The event is a useful opportunity to share information and exchange views with all the stakeholders involved in the incentive mechanisms. Ample space will also be given to ENEA's role in the operation of the two mechanisms, to the audit as a prerequisite for accessing the support mechanisms dedicated to gas-intensive and energy-intensive companies, and to the obligations set out in the regulations concerning the implementation of the measures identified in the audit. The obligations for large companies and energy-intensive companies under Art. 8 of Legislative Decree 102/2014 will then be described. Ample space will also be given to participants during the question time.

Ecclesiastical bodies and energy efficiency

Organised by Federesco ets (National Federation of Energy Service Companies)

The event we are proposing (as the second edition following 2026) addresses the challenge of the energy retrofitting of the building stock of ecclesiastical bodies in light of the new European "Green Homes" Directive (EPBD) and the principles of Pope Francis's Laudato Si'. This vast heritage, often subject to historical and architectural constraints, requires targeted and economically sustainable intervention strategies. During the meeting, the financing and operating models enabled by ESCOs (Energy Service Companies) will be analysed, along with the strategic opportunities offered by Renewable Energy Communities (CER) as a tool for the social valorisation of diocesan assets. Case

studies and guidelines will be presented for reconciling the protection of historical and artistic value with technological innovation and energy independence.

Heat pumps as a strategic technology for national energy security and autonomy

Organised by: Clust-ER Energy and Sustainable Development, RSE

Heat pumps are a strategic technology for decarbonisation and national energy security, supporting the phase-out of fossil fuels and increasing the efficiency and flexibility of networks. The field of application of heat pumps is very broad and includes residential and commercial buildings, industrial applications, district heating and cooling networks, geothermal energy and integration with other renewable sources. Moreover, in the face of climate change and the intensification of urban heat waves, heat pumps are also becoming a key safeguard for summer cooling, ensuring efficiency and sustainability throughout the year.
The conference organisers have been working on the topic for some time and on this occasion intend to present the results of their activities, encouraging dialogue between different kinds of players: industrial operators in the sector, research, local authorities and users. The topics addressed will include the systemic design of buildings with heat pumps, integration with geothermal energy, other renewable sources and storage, flexibility services for the electricity grid, and high-temperature industrial applications.

Measurement and verification of energy savings

Organised by FIRE

Event language: English

Measurement and verification (M&V) of energy savings is a fundamental activity in energy management, in performance-guaranteed energy services (such as EPC and EaaS) and in results-based incentive mechanisms (such as white certificates). M&V requires assessing the difference between consumption before and after the intervention, taking into account the trend of other factors that influence variations in consumption. Cases from different sectors will be presented.

White certificates: the latest developments

Organised by FIRE

The traditional event organised by FIRE in collaboration with Key returns, presenting the results achieved, the tools activated by GSE to support operators, and the latest developments, with a view to encouraging operators' participation in the scheme. A discussion with participants will follow to take stock of the TEE mechanism.

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Heat pumps and industrial policy: installed in Europe, but made where?

Organised by ECCO – the Italian climate think tank

Heat pumps are the main technology for electrifying heating and reducing dependence on gas. The European sector is, however, heterogeneous. National markets differ in technologies, incentives and rules. The value chain includes different segments, from finished units to heat exchangers, from compressors to control systems. In some of them European industry is at the forefront; in others it depends on imports.

In photovoltaics and batteries, Europe helped create the demand, but production grew elsewhere, above all in China. European responses came when market shares had already shifted. With heat pumps the starting point is different. Europe still has a solid industrial base, but fragmented markets and inconsistent incentives are holding back its growth. The challenge for European industrial policy is to link demand-side support to production in Europe, without slowing the deployment of the technology.

The event will be an opportunity to present the results of a study carried out by the think tank ECCO and the German foundation Stiftung Klimaneutralität (SKN), starting from a few key questions:

- What is the long-term vision for European industry?
- What are the conditions for ensuring stable demand for technologies and products?
- In which manufacturing segments can Europe compete with China and with emerging economies?
- What role can Italy play?

Energy Efficiency Award – Corporate Energy Efficiency

Promoted by FIRE, Legambiente, KEY

The Award recognises concrete, measurable and replicable projects in energy efficiency, decarbonisation and technological innovation applied to energy. To find out more: **https://fire-italia.org/premio-energy-efficiency/**

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Hype – Hydrogen Power Expo

Hydrogen Valleys

Organised by ART-ER

The fourth session of the Regional Hydrogen Valleys workshop explores the role of Hydrogen Valleys in promoting sustainable territorial development and supporting Italy's energy transition. Structured as a Talk, the event will bring together companies and facilitators from different regional value chains to present their current stage of development and opportunities for collaboration, highlighting their strengths, weaknesses and potential synergies that could be leveraged at national level. The event aims to explore the key aspects of value chain development from the perspective of local territorial ecosystems, while offering insights into the potential of Hydrogen Valleys within the national context. This workshop will provide stakeholders with a unique opportunity to exchange ideas, explore collaboration opportunities and contribute to the development of Hydrogen Valleys as key drivers of Italy's energy transition.

Hydrogen auctions: the market gets under way – how to prepare for the next phase of market development

Organised by H2IT

With the first auction expected to open between the end of 2026 and the beginning of 2027, the conference will analyse the role of national auctions, operators' expectations, access criteria, the certification of renewable hydrogen, the prospects for producers and off-takers, and the comparison with Europe. Direct involvement of MASE and GSE

Made-in-Europe technologies and industrial competitiveness: strengthening the supply chain through innovation, resilience and strategic autonomy

Organised by H2IT

Europe aims to consolidate its technological leadership through industrial policy instruments and support for strategic supply chains. The session will analyse the evolution of the Industrial Accelerator Act and the measures supporting European production of components, electrolysers, systems and technologies for the hydrogen economy.

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Zero Emission logistics ecosystems, hydrogen and derivatives: the challenge of decarbonising ports, airports, maritime and aviation

Organised by H2IT

The conference explores the role of renewable hydrogen derivatives in the development of new value chains for hard-to-abate transport. From the production of e-fuels and sustainable fuels to the creation of integrated zero-emission logistics ecosystems, the discussion will analyse emerging demand in the maritime and aviation sectors, the European regulatory framework, the strategic role of ports and airports, and the conditions needed to launch truly sustainable cross-border logistics corridors. Field experience, pilot projects and industrial perspectives compared.

Hydrogen and Hard-to-Abate Sectors: Impacts on Competitiveness and Optimal Conditions for Development in Italy

Organised by AGICI e H2IT

With the entry into force of the Decree on Incentive Tariffs and the anticipated launch of the first auctions, renewable hydrogen could become a tangible driver of decarbonisation in hard-to-abate sectors, where direct electrification alone is not sufficient.

The conference will present the key findings of the study conducted by AGICI in collaboration with H2IT, which provides an overview of the current state of the hydrogen market in Europe and Italy. The analysis aims to highlight both the challenges currently facing the sector and the concrete opportunities – also arising from the new incentive scheme – to drive decarbonisation and strengthen the competitiveness of Italy's hard-to-abate industries.

Eme – Emobility Expo

National forum on public charging – First edition

Organised by Motus-E in collaboration with GSE

In just a few years the public charging network in Italy has grown significantly, and it is now looking towards new targets for coverage and service quality.

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The Forum brings together institutions, stakeholders and major companies in the sector to take stock of the Italian situation, compared with the European framework. The dialogue will touch on the issues that shape its evolution: the roll-out of high-power infrastructure, grid connections and tariff models. Also at the heart of the discussion will be the key role of motorway coverage and of the conversion of fuel service stations to electric.
The event organised by Motus-E aims to read market trends and prospects and to identify opportunities for an increasingly efficient, accessible and integrated network.

The future of fleets is electric: experiences, tools and opportunities

Organised by Motus-E, Quattroruote

Company fleets are a central node in the electrification of Italy's vehicle stock. The event organised by Motus-E is meant to be a practical forum for exchange between experts, companies and operators from the automotive and charging sectors, who will discuss the key steps of the journey: from assessing costs and benefits to the tax framework, through to building charging infrastructure on company premises. Best practices already under way will be presented, with the results achieved, the difficulties encountered and the solutions adopted to overcome them. The discussion will also help to read sector trends and the opportunities for making Italian fleets protagonists of the mobility of the future.

Observatory on private charging: where we are and where we can get to

Organised by Motus-E

Homes, apartment buildings, workplaces, accommodation and commercial facilities: private charging is part of electric drivers' daily lives.

The event will offer an up-to-date picture of the sector, starting with the incentives dedicated to private charging. The measures of recent years will be reviewed, with the results obtained and the lessons learned, in order to arrive at an estimate of the total number of home charging points in Italy. The focus will then shift to the players that can enable the next phase of development: apartment buildings, accommodation facilities such as B&B and hotels, commercial businesses and small retailers. Together with trade associations and companies, the discussion will identify the obstacles that still remain and the actions needed to get investments concretely under way.

The Zero Emission Trucks project and the AFIR regulation

Organised by Kyoto Club and Motus-E

Achieving the 55% cut in greenhouse gas emissions by 2030 and climate neutrality by 2050 also depends on the decarbonisation of road freight transport. In Italy, in 2019 greenhouse gas emissions

from transport amounted to 105.5 million tonnes of CO2, equivalent to 25.2% of total emissions. A detailed analysis of national emissions shows that road transport accounts for 92.6% of the total: of this, 68.7% comes from private passenger vehicles, 15.4% from heavy goods vehicles, 10% from light commercial vehicles and 3.1% from bus transport (ISPRA data). Compared with 1990, transport emissions have increased instead of decreasing, as required by international climate agreements.

It is therefore clear that action is also needed in the road freight sector.

The ZET Italia – Zero Emission Trucks – project, coordinated by Kyoto Club and Motus-E, involves ABB, Scania, Confartigianato Imprese, Confartigianato Trasporti, Kyoto Club, MOTUS-E, Politecnico di Milano, Tesla, Transport & Environment Italia, Cambridge Econometrics and UPS Italia.

The purpose of the conference, held as part of the ZET Italia Project, is to discuss the technical, economic and environmental issues related to the development of zero-emission freight vehicles by 2050, including the implications for local mobility logistics, with particular reference to the implementation in Italy of the EU AFIR Regulation (Alternative Fuels Infrastructure Regulation), in force since 13 April 2024, which obliges Member States to develop adequate infrastructure for alternative fuels, facilitating mobility with zero-emission vehicles.

Electric charging and upstream infrastructure: technical and regulatory challenges and opportunities

Organised by ANIE E-Mobility Group and Motus-E

The growth of electric mobility makes the issue of the infrastructure upstream of charging points increasingly strategic. The conference will look in depth at aspects related to grid connections, power availability, MV/LV substations, energy distribution and monitoring systems, as well as regulatory developments affecting the roll-out of charging infrastructure. Through the contributions of players across the supply chain, the main critical issues and technological solutions will be analysed to ensure the reliability and sustainability of the networks supporting the electric transition.

Electric beyond the car: from “batteries on four wheels” to electric ferries

Organised by Transport & Environment

The electrification of transport goes beyond the car and opens up new opportunities for the energy transition. From Vehicle-to-Grid (V2G) technology, which allows electric cars to act as “batteries on four wheels” supporting the electricity grid, to the electrification of ferries, already technically and economically feasible on most Italian routes, new opportunities are emerging to reduce emissions, improve air quality and contain energy costs.

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New flexibility enabled by the roll-out of the CIR (Charging Infrastructure Controller) in private charging

Organised by: RSE

The progressive electrification of consumption, the spread of renewable sources, the development of electric mobility and the growing role of users are transforming the electricity system into an increasingly distributed, digital and participatory ecosystem. In this context, energy flexibility plays a strategic role in strengthening grid security, improving system efficiency, encouraging participation in markets and reducing costs for citizens, businesses and communities. The seminar and round table will present the first results of the working group set up by RSE and will promote dialogue among grid operators, aggregators, technology providers, charging infrastructure operators, energy communities, institutions, regulators, associations and research centres. The aim is to discuss how to make the most of the business models enabled by the CIR ecosystem, making aggregation more attractive and worthwhile for owners of this device.

Starting from the results of the RSE working group, the discussion will focus on presenting and discussing barriers, enabling conditions, System Use Cases and Business Use Cases, together with remuneration mechanisms and the ways of coordinating grid services, market services and local optimisation logics. The ultimate goal is to help build a coherent framework that makes flexibility an observable, verifiable, interoperable and concretely valuable resource, for the benefit of the electricity system and of those who make their own resources available

BATTERY STAGE (DAY) 2027 | Inside the supply chain that is changing energy

Organised by eV-Now!

A discussion among those who design, produce, integrate and use batteries and recover their materials, to read the industrial present of the sector and the transformations that will define its future. From raw materials to new chemistries, from cell production to systems engineering, through to second life and recycling, by way of an analysis of the sector's industrial and strategic approaches: a journey along the entire supply chain, with one certainty at its centre. Batteries are the protagonists of the industrial revolution under way.

Battery Stage connects electric mobility, industry, storage and renewables, going beyond the boundaries of individual applications: from vehicles and industrial machinery to systems for buildings, businesses, charging and electricity grids. Because the value of a battery is not exhausted by its performance, but also depends on how it is designed, produced, managed and integrated into the energy system.

Space for innovations and for the less visible aspects that determine success: design & R&D, real production capacity, costs, safety, durability, data management, the Battery Passport and the economic sustainability of circularity. With concrete cases and perspectives from Italy, Europe and international supply chains, the discussion will offer a reading of the scenarios for 2027 and the coming years, distinguishing what is already available, what must grow to industrial scale and what remains to be proven.

Not only which batteries we will have, but who will make them, how we will use them and where their value will be built.

Cross-Cutting Topics

The development and applications of AI in the energy sector

Organised by Althesys

The event looks at the role and development prospects of Artificial Intelligence in the energy sector, through a mapping of the main applications along the value chain, from generation to transmission, distribution and consumption of energy, focusing on the state of developments in Italy. The analysis explores the main areas of use of AI and the potential opportunities for improvement and innovation in the different segments of the sector. Through the examination of national and international case studies, some of the most innovative and high-impact solutions are illustrated, highlighting their characteristics, how they are applied and, where available, the results achieved. By involving leading players, the conference also offers an overview of the main opportunities and challenges linked to the adoption of AI, outlining possible developments and the areas of greatest interest for energy operators.

Renewables: Italian best practices for facilitating local acceptability

Organised by: Coordinamento FREE

The rapid acceleration of utility-scale plants, essential to meet the country's decarbonisation targets, often suffers from permitting delays and low local support. Field experience shows that these obstacles often stem from a deep information asymmetry and from the lack of structured opportunities for dialogue between developers and investors on one side and local administrations and citizens on the other. What is needed is greater maturity in the sector and a paradigm shift that aims, from the earliest stages of development, to turn territories from passive recipients into leading players, through dialogue and full transparency on projects, while paying attention to the local benefits the plants bring.

In this context, Coordinamento FREE positions itself as a privileged observer of national best practices, with a genuine permanent observatory. The focus is on tangible solutions and operational tools, with the aim of outlining a systemic model of "pre-acceptability". The sector's leading experts will explore how trust between the parties is built by integrating, from the outset, three strategic levers: early involvement of citizens, enhancement of the local ecosystem, and the adoption of inclusive mechanisms for sharing economic and social benefits.

In continuity with the previous edition of the conference, held in March 2026, the session will feature the direct participation of the protagonists of the most virtuous experiences gathered across the

country: developers, investors, environmental organisations, public administrators and local committees that have managed to turn potential friction into opportunities for shared development. Through their accounts, the event will offer a unique learning space to analyse tools that can be replicated nationwide, showing how the integration of industrial interests, local economies and the protection of local needs is the key to accelerating Italy's energy transition and, at the same time, producing lasting value for local communities.

Analysis of practical cases of electrification of industrial thermal uses

Organised by: Coordinamento FREE

The decarbonisation and electrification of industrial thermal uses is certainly one of the challenges of the coming years. This decarbonisation and electrification path will certainly be helped by the international geopolitical situation, which keeps fossil fuel prices high and therefore pushes companies increasingly towards innovation and consumption efficiency. At the same time, however, there are objective barriers limiting a rapid acceleration of this transition path, in particular the technological maturity of some solutions, an energy bill in which most system charges fall on the electricity component, and the limited uptake of good practices that already exist at national level.
Thanks to the collaboration with AssoEGE and the support of FIRE, AssoESCo and many other associations that are part of FREE, it was possible to go into companies and collect and validate a series of case studies already completed or under way, involving different industrial sectors and different types of electrification (process heat above 80–100 °C, steam, replacement of cogeneration, other).
Among the cases analysed, the potential of self-generation (on-site and remote) and the use of storage systems (both electrical and thermal) were also investigated, the latter still little used in industry.
The aim of the conference is therefore to provide industry operators with clear, validated practical cases, with their benefits and any remaining critical issues, which can concretely support industry on its path of progressively moving away from fossil fuels.

Comparing political programmes: climate crisis and energy autonomy

Organised by: Coordinamento FREE

In light of the accelerating climate crisis and the strong, persistent international geopolitical tensions that continue to keep fossil fuel prices high, the energy policies that will be implemented during the next legislature are becoming ever more central to the wellbeing of citizens and the health of Italian businesses.
The conference aims to compare the energy policies contained in the electoral programmes of the main coalitions, using as a starting point the evidence contained in the second edition of the Green Paper on the Energy Transition, a tool of synthesis and analysis capable of offering an up-to-date picture of the progress of the energy transition, with particular attention to the Italian context.
The topic will be discussed with representatives of the main political parties.

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Good news, bad news, fake news: unlocking the transition to electric

Organised by Italy for Climate

Electrification is struggling to take off but, together with renewables, it is the other pillar of the transition. Italy for Climate presents an overview of how things are going in Italy across the three sectors, looking at both good practices and the technical, economic and cultural obstacles that still hold it back, together with the policies and strategies to overcome them. The debate will involve technical experts, business associations and individual organisations that have managed to move this transition forward.

Clean Industrial Deal and Chinese competition: which tools to strengthen European and Italian cleantech industry

Organised by Cleantech for Italy

The event addresses the trade-off that currently runs through the European position: climate and energy urgency requires the rapid installation of technologies largely manufactured in China, while industrial and security policy demands recovering, at least in part, manufacturing capacity. It is in this space that the conditions introduced by the Industrial Accelerator Act on foreign direct investment sit.
Two distinct questions follow: the first concerns European trade policy in cleantech, while the second, less explored, concerns the terms of collaboration with Chinese companies that intend to manufacture in the Union. That is, where the line lies between an investment that builds local expertise and one that is limited to assembly.

From energy access to energising economies: the productive uses of energy

Organised by Res4Africa Foundation

Event language: English / French

The Productive Use of Energy (PUE) transforms mere access to electricity into a catalyst for economic growth.

By powering tools like agricultural processing mills, solar cold-chain refrigerators, and electric sewing machines, PUE enables local businesses to increase income, reduce post-harvest losses, and create local jobs.

Moving from baseline household electrification to energizing rural economies relies on unlocking a "virtuous cycle" of development. Simply providing power is rarely enough; long-term economic

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sustainability requires a deliberate strategy combining power infrastructure with affordability, financial services, and skill training.

in a nutshell PUE can take to:

- strengthen rural economic activity
- increase small and medium sized enterprises' productivity
- increase job creation
- mobilise increased resources for economic and social development

Overall, PUE's impact on economic development is therefore directly linked to SDG 8 "Promote inclusive and sustainable economic growth and employment".

The panel is intended to focus on the importance of the productive use of energy for the African continent, identifying the possible areas of collaboration between Africa and Europe.

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