Paris Energy Club Spring Meeting

21 May 2026

Electrification in Europe:
Industrial Sovereignty, Energy Transition and Competitiveness

09:00 - 09:30
Registration and Welcome Coffee

09:30 - 09:40
Welcome Remarks and Introduction

09:40 - 11:10
Session 1 - Europe: Electrification strategy and challenges

11:10 - 11:25
Coffee Break

11:25 - 13:00
Session 2 - China: Electrification Model and Lessons for Europe

13:00 - 14:00
Lunch

14:00 - 15:30
Session 3 - Batteries: Industrial Sovereignty and Dependencies

15:30 - 16:00
Coffee Break

16:00 - 17:30
Session 4 - E-fuels: Complement or Strategic Alternative?

17:30 - 17:45
Sum-up

17:45 - 19:00
Networking Cocktail

09:40 - 11:10

Europe: Electrification strategy and challenges

The ability to increase electricity consumption is essential for Europe, not only for climate reasons but also to reduce its dependence on fossil fuel imports. Whether in industry, transport, buildings or hydrogen production, low-carbon electricity is becoming the central vector of decarbonization.

However, this transformation entails a dual requirement: accelerating the energy transition while strengthening Europe's energy and industrial sovereignty in a context of geopolitical tensions, dependence on critical raw materials and intensifying global competition.

The European Union has committed to ambitious targets for 2030 and 2050, implying a significant increase in electricity demand. This requires the development of a generation mix compatible with these ambitions: variable renewables, nuclear power, flexibility solutions, storage, interconnections and demand-side management. However, many challenges remain: poorly connected European regions lead to structurally higher prices than competitors just across a border; electricity market design reforms need to be continued to develop more flexibility while ensuring competitive and accessible prices for consumers.

This session will examine the conditions for successful European electrification, the trade-offs to be made in the generation mix, and the levers available to make the energy transition a driver of sovereignty and prosperity.

Questions to be addressed include:

- How can we build an electricity system that is at once decarbonized, competitive, resilient and socially acceptable?
- How can industrial policy, security of supply and internal market integration be aligned?
- Is the current electrification pathway in Europe consistent with the climate and industrial objectives set for 2030 and 2050?
- What balance should be struck between renewable energy, nuclear power and other dispatchable sources in the future European electricity mix?
- How can security of electricity supply be guaranteed in a system dominated by variable renewables?
- How can the challenges of renewable integration be addressed while ensuring competitive and affordable prices for industrial and residential consumers?
- What priority investments are required in grids, storage and demand flexibility?
- Should Europe rethink its electricity market model to support investment and industrial competitiveness?
- Can electrification become a pillar of a new European industrial strategy, or does it risk increasing external dependencies?
- How can the acceleration of energy projects be reconciled with social and territorial acceptability?

Speakers:

Marc Oliver Bettzüge, Director, Institute for Energy Economics, **University of Cologne**
François Dassa, Director, Long Term Program, **EDF**
Antonio Lopez-Nicolas, Head of the Chief Economist Unit, DG Energy, **European Commission**

Moderator:

Pierre-Franck Chevet, President, Paris Energy Club - Chairman and CEO, **IFPEN**

11:25 - 13:00

China: Electrification Model and Lessons for Europe

The global energy transition is accelerating, and China now occupies a central position in this transformation. Over the space of two decades, it has become the world's largest investor in renewable energy, the industrial leader in batteries and electric vehicles, and a dominant player in low-carbon technology value chains. Its electrification model is based on long-term strategic planning, massive industrial support, vertical integration of value chains and large-scale execution capacity.

However, this model is rooted in a specific context: strong historical dependence on coal, the structuring role of state-owned enterprises, state-directed investment and energy security priorities. Europe, for its part, is pursuing its own climate objectives within a different institutional, economic and democratic framework.

This session aims to look at China's electrification model and strategy to identify actionable levers for Europe, both in terms of industrial policy and technological sovereignty, social acceptability and competitiveness. The objective is to open a clear-eyed, comparative and strategic debate on electrification pathways in a fragmented world.

Questions to be addressed include:

- What are the fundamental pillars of China's electrification model (planning, subsidies, value chain control, industrial policy)?
- To what extent does China's success rely on institutional specificities that are difficult to replicate in Europe?
- Is China's leadership in batteries and electric vehicles the result of a coherent strategic vision or a sequence of industrial opportunities?
- How has China reconciled energy security, economic growth and rapid electrification?
- Does maintaining significant coal capacity constitute a contradiction or a stabilizing element of the Chinese system?
- Should Europe adopt a more interventionist industrial policy to remain competitive vis-à-vis China?
- How can Europe reduce its dependence on Chinese supply chains while continuing electrification?
- What lessons can be drawn from China's approach to integrating renewables into the electricity grid?
- What economic and geopolitical risks does Europe face if it fails to accelerate its own electrification model?
- By 2035–2050, can we envisage a convergence of the European and Chinese models, or are structurally divergent pathways emerging?

Speakers:

Andres Hove, Senior Research Fellow, **Oxford Institute for Energy Studies**
Keisuke Sadamori, Director, Energy Markets and Security, **International Energy Agency**
Pierpaolo Cazzola, Director, **UC Davis European Transport & Energy Research Center**

Moderator:

Patrick Blanc-Tranchant, Deputy director of Low Carbon Energy Programs, **CEA**

14:00 - 15:30

Batteries: Industrial Sovereignty and Dependencies

Batteries have become a strategic link in Europe's energy and industrial transition. At the heart of electric mobility, renewable energy storage and numerous industrial applications, they determine both decarbonization and the continent's future competitiveness. Today, however, battery value chains are largely dominated by Asian players, both in cell production and in the refining of critical raw materials.

In response, Europe has launched ambitious initiatives to develop a domestic industry: gigafactory projects, industrial alliances and strengthened public support. Yet industrial sovereignty cannot simply be decreed. It requires secure access to lithium, cobalt, nickel and graphite, technological mastery of cells and processes, as well as innovation capacity in next-generation batteries.

Some dependencies persist in the face of geopolitical rivalry and rapid electrification, thus weigh risks on Europe's electrification strategy.

This session will examine Europe's battery trajectory, the conditions for successful industrial deployment, and levers that need to be mobilized to reconcile strategic autonomy, competitiveness and environmental sustainability.

Questions to be addressed include:

- Where does Europe truly stand in building an integrated and competitive battery value chain?
- Will European gigafactory projects be sufficient to reduce dependence on Asian producers?
- Which dependencies are most critical: cell technologies, industrial equipment, or raw materials?
- How can the supply of lithium, nickel, cobalt and graphite be secured in the context of heightened global competition?
- Is mining in Europe a realistic option, or politically difficult to accept?
- How can refining and raw material processing capacity be strengthened within Europe?
- Are current public policies suited to supporting innovation (solid-state batteries, new chemistries)?
- What role should recycling play in Europe's industrial sovereignty strategy?
- Can Europe remain competitive in the face of massive subsidies and economies of scale in other major powers?
- How can European industrial value chains (batteries, electrolysers, grids, critical components) be strengthened in the face of international competition?

Speakers:

Yann Vincent, CEO, **Automotive Cells Company**
Christophe Gurtner, CEO, **Forsee Power**
Fabrice Bertoncini, Executive Vice President, New Development & Transformation, **Axens**

Moderator:

Saïd Nachet, Director, Paris Energy club - Director, International Relations, **IFPEN**

16:00 - 17:30

E-fuels: Complement or Strategic Alternative?

Decarbonizing sectors that are difficult to electrify is one of the greatest challenges of the global and European climate transition. Among them, aviation occupies a central place: strategic for the continent's connectivity, yet highly dependent on fossil fuels. In this context, e-fuels – or synthetic fuels produced from low-carbon electricity, hydrogen and captured CO_2 – are emerging as a promising technological lever.

Europe has positioned itself as a frontrunner, with ambitious targets enshrined in the "Fit for 55" package and the ReFuelEU Aviation regulation, aimed at accelerating the integration of sustainable fuels in air transport. However, their relevance raises major questions: availability of renewable electricity, economic competitiveness, prioritization of uses, industrial sovereignty and dependence on imports.

This session will examine, from both a European and international perspective, the real capacity of e-fuels to constitute a credible tool for sectoral transition, particularly in aviation. Are they an unavoidable strategic solution or an expensive technological bet compared with other options? How can climate ambition, economic viability and global fairness be reconciled?

Questions to be addressed include:

- In the European context, do e-fuels represent a strategic necessity to decarbonize aviation, or a complementary solution alongside other sustainable fuels (biofuels, SAF)?
- Does Europe genuinely have the renewable electricity and green hydrogen capacity required to support a competitive e-fuels industry?
- How should trade-offs be managed at European level between different uses of hydrogen and low-carbon electricity (heavy industry, maritime transport, aviation, storage)?
- Is the current European regulatory framework sufficient to stimulate investment, or does it create uncertainty for industrial actors?
- What impact will e-fuels have on the cost of air transport in Europe,what social implications could this entail?
- Should European production be prioritized for reasons of energy sovereignty, or should dependence on imports from regions with strong renewable potential (North Africa, the Middle East, Latin America) be accepted?
- At global level, does Europe risk a loss of competitiveness if other regions adopt less stringent regulatory pathways?
- How can the environmental integrity of e-fuels (CO_2 traceability, renewables additionality) be ensured in a globalized market?
- Should e-fuels be reserved for hard-to-electrify sectors such as long-haul aviation, or can they play a broader role?
- By 2040–2050, will e-fuels be a structuring pillar of the global energy transition, or a niche technology within a mix dominated by other solutions?

Speakers:

Nicolas Jeuland, Low Carbon Fuels & SAF Specialist, **Safran**
Antoine Laborde, Director Fuel Procurement, **Air France**
Romain Verdier, Deputy Director, **Verso Energy**

Moderator:

Bertrand Charmaison, Director, I-Tésé Institute, **CEA**