

# EUROMOST 2026

## *The First European Conference on Molten Salt Reactors*

KEY NOTE de Raphaël SCHELLENBERGER (15/20')

### **Nuclear energy is not a trend**

Ladies and Gentlemen,

I.

Over the past few years, nuclear energy has experienced a form of political and intellectual rehabilitation across Europe.

After decades of doubt, and sometimes even deliberate abandonment, many are suddenly rediscovering its virtues: sovereignty, stability, decarbonization, and strategic independence.

In France, this rediscovery has become particularly visible. Only a few years ago, our public debate was still largely organized around the idea that nuclear power had to decline. Today, the central political question has become the electrification of uses: mobility, industry, heat, data, and everyday life.

This reversal is not a technical detail. It reveals how quickly a nation can rediscover the strategic value of its electric system.

This rediscovery is good news. But it also carries a risk.

The risk of treating nuclear energy as a technological trend, as just another innovation product; as an industrial fashion expected to provide immediate answers to contemporary demands.

Yet nuclear energy is not a trend. In fact, nuclear energy is probably the exact opposite of a trend. Because the timescale of nuclear power is not the timescale of media cycles, political communication, or short-term announcements.

Nuclear energy belongs to the long term. To science. To industry. To civilization itself.

The decisions we make in this field produce consequences that last for a century. And that is precisely why nuclear energy is such a profoundly political matter.

II.

In France, the recent return of nuclear power to public debate perfectly illustrates this ambiguity. For many years, our energy policy was organized around the gradual reduction of nuclear energy. Then, quite suddenly, at the very moment when the energy crisis was becoming impossible to ignore, this strategy was reversed.

In France, this reversal was symbolized by the Belfort speech in 2022. It came at a moment of great tension: the situation in Eastern Europe was already unstable, our nuclear fleet was facing serious technical difficulties, hydroelectric production was weakened, and the coming energy crisis was no longer a theoretical possibility.

It was a necessary shift. But it was also a shift made under pressure, before all its strategic consequences had been fully articulated.

We rediscovered two fundamental truths.

1/ First: electricity is an instrument of sovereignty.

When I use the word sovereignty, I know it does not carry exactly the same meaning in every European political culture. In some countries, it is understood mainly as security of supply, resilience, or diversification of dependencies.

In the French tradition, it also means something deeper: freedom of action, continuity of the State, and the ability to make essential choices without being constrained by geopolitical pressure or technological dependence.

This is the intellectual place from which I speak today: For France, electricity is not only a commodity. It is one of the material conditions of political freedom.

Even when certain raw materials must be imported, a power system based on nuclear and domestic low-carbon production drastically reduces dependence on geopolitical fuel flows.

2/ Second: the French electricity mix, built since the 1970s around the pursuit of energy independence, represents an extraordinary opportunity for decarbonizing our economy.

But this renewed interest in nuclear energy has sometimes been accompanied by confusion.

In order to make this strategic shift politically acceptable, we attempted to present nuclear power through the language of disruption, agility and technological novelty, almost borrowing the codes of the digital economy.

The new nuclear industry would necessarily be small, modular, flexible. In this context, the SMR gradually became as much a political object as a technical one. I say this not to challenge the relevance of Small Modular Reactors. Some of them will undoubtedly answer specific and legitimate needs.

But we must remain lucid: the size of a reactor is not an energy doctrine. Modularity is not an industrial policy. And innovation cannot become an objective in itself.

In France, support for SMRs has sometimes served as a way to give political form to a strategic reversal. I observe, with the same caution, certain European debates around fusion: the temptation is always the same — to transform a long-term scientific ambition into a convenient political narrative.

Nuclear energy does not function according to the logic of digital platforms. It requires continuity, coherence, rare expertise, massive investments. And above all, an exceptional level of collective responsibility.

In nuclear energy, competition does not automatically create abundance. When too many projects draw on the same limited pool of engineers, safety experts, laboratories, public funding and regulatory attention, dispersion itself can become a strategic cost.

A nuclear nation must therefore be able not only to encourage initiatives, but also to organize priorities.

Because nuclear energy tackles something fundamental in modern societies: our relationship to time, risk, and future generations.

### III.

That is why I deeply believe that nuclear development cannot be left entirely to market forces.

I say this also as a parliamentarian. My role is not to choose reactor designs, nor to replace scientists, engineers or operators. But it is to remind us that some technologies engage the responsibility of the State because they engage the future of the nation itself.

The State retains a particular responsibility in this field. Not only because the investments involved are immense, but because the stakes go far beyond short-term profitability.

In my view, two priorities should structure our reflection.

1/ The first concerns the fuel cycle.

A mature civilisation cannot consider it acceptable to leave future generations alone with the burdens created by its own prosperity.

When we speak about the fuel cycle, we are not speaking only about chemistry, neutrons or industrial processes. We are speaking about trust. Citizens can accept a demanding technology if they believe that those who use it today are also taking responsibility for its consequences tomorrow.

We therefore have both a political and moral duty to pursue research capable of reducing waste, improving fuel efficiency, and strengthening long-term sustainability. From this perspective, France's recent decision to revive research into fast neutron reactors is excellent news.

Not out of technological nostalgia, but because it reflects a willingness to reconnect with a long-term scientific ambition.

And that ambition is also essential for the future of even more promising technologies, among which molten salt reactors naturally occupy a central place.

2/ The second priority is safety.

Here again, we must recover an approach grounded in science rather than endless administrative accumulation. By continuously adding new rules without always questioning their overall coherence, we have sometimes made certain projects almost impossible to build. This was one of the factors behind the construction difficulties encountered at Flamanville.

The objective cannot simply be the indefinite multiplication of theoretical constraints. The objective must be the concrete improvement of actual safety. And this is precisely where new technologies open extraordinary possibilities.

The intrinsic safety potential offered by certain reactor designs, particularly molten salt technologies, represents a major scientific breakthrough.

Likewise, modularity becomes genuine progress only when it serves industrial and safety logic, rather than political storytelling.

That is why it is essential not to confuse research with innovation.

Research pursues knowledge. Innovation seeks applications.

In nuclear energy more than anywhere else, that distinction matters. Because without fundamental research, without scientific patience, without institutional continuity, there can be no lasting progress.

#### IV.

And yet, despite all these necessary precautions, I remain profoundly optimistic.

Europe possesses something rare in nuclear energy: an exceptional historical, scientific and industrial depth.

We have engineers, physicists, chemists, industrial expertise, research infrastructures, a complete supply chain. Very few regions in the world still possess such technological capabilities.

And above all, we are gradually rediscovering that nuclear energy is not merely an energy issue.

It is a civilizational project.

In 1957, the founders of Europe clearly understood that certain strategic resources had to be organised at the continental level.

They had experienced war. They understood that energy, industry and power could either divide Europeans, or unite them durably.

That is why they created Euratom. Nuclear energy therefore lies at the very origin of European construction.

1957 may sound like distant history. But it is older than my father, and yet close enough to explain the peace my generation has inherited. I belong to a generation of Europeans that has never known war between our nations. That is not an accident. It is the result of political choices, institutions, and shared strategic projects.

We are its heirs.

## V.

I am convinced that molten salt reactors can become one of the great European scientific projects of the 21st century — not only because they carry immense technological promise, but also because they compel us to think collectively about long-term responsibility, scientific cooperation, environmental sustainability, and European sovereignty.

Their promise is not abstract. They may one day help provide high-temperature heat for industry, support hydrogen production, contribute to thermal storage, improve fuel utilization, and offer new ways of integrating nuclear energy into the broader energy system.

But precisely because these possibilities are so important, they must be pursued with seriousness, patience and scientific discipline.

No European nation will meet such a challenge alone. But together, we can build a common ambition worthy of our scientific and industrial history.

And perhaps even, which would already be a remarkable achievement, finally succeed in making physicists and chemists work together permanently.

## VI.

I firmly believe that sustainable nuclear energy will not simply be a technological success. It can become a political and European success as well. Because ultimately, the real question raised by nuclear energy is not merely how to produce electricity.

The real question is whether our societies are still capable of thinking in the long term, acting with patience, and building together something that will outlast them.

What you are building here is therefore more than a technological community. It can become one of the places where Europe relearns how to think, decide and build at the scale of a century.

And perhaps, in the end, that is the very definition of civilization.