Les Entretiens Européens
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Priorities to reinvent the Union's energy strategy

The geopolitical crisis has spotlighted the failings in our electricity market. The emergency measures taken by our governments have proved costly and unsustainable: market reform is necessary and is being discussed.
At the *Entretiens Européens* conference held in Paris on 16 June[1], we examined the options proposed by the Commission with operators, consumers and investors: can they encourage the reindustrialisation and decarbonisation of Europe, long-term investment and cooperation for the common good?

Present for the debate, moderated by Director of *Entretiens Européens* Claude Fischer Herzog, were the European Commission, represented by Nicola Pesaresi, Head of Unit at DG COMP, Antoine Bizet, Nuclear and Competition Adviser at EDF's European Affairs Department, Frank Roubanovitch, Chairman of the CLEEE (electricity-intensive industrial and service companies), and Elena Burdykina, Executive Director, Sustainable Banking, Crédit Agricole CIB.

The options are currently under study by the member states, which are divided over the content of the reform and its timetable. Everyone is looking for allies to ratchet up pressure.
Sixteen states have come together, under France's initiative, to form an Alliance. But they are not in full agreement, so will they succeed in mobilising civil society for a true energy transition in which nuclear power has its rightful place? Should nuclear states in need of urgent structural reform not do more to foster permanent structured cooperation?

Moderated by freelance journalist Ann MacLachlan, discussions took place between representatives from France, with François Goulard, former Minister for Higher Education and Research and Vice-President of PNC-France, from Poland, with Michal Kurtyka, former Minister for Climate, and from Belgium,

[1] Find the debates on YouTube: https://www.youtube.com/watch?v=5YGd34rqsNY
This conference is a follow-up to the 20th *Entretiens Européens*, held in Brussels on 13 October 2022 on the theme "The future of European nuclear power investments in a context of global instability and geopolitical change" - www.entretiens-europeens.org.

with Marie-Christine Marghem, Member of Parliament and former Federal Minister of Energy, Environment and Sustainable Development.

Following the two round table discussions, Claude Fischer Herzog drew a number of conclusions and proposed options, which have become the subject of an open letter to the national and European institutions in preparation for the European Council on 29 June 2023[2].

In this article the Director of *Entretiens Européens* gives consideration also to the last meeting of the Energy Council held on 19 June. She proposes priorities to reinvent the Union's energy strategy.

Dialogue and specific proposals for an electricity market reform with long-term contracts

Nuclear power has made its return to the public debate and the nuclear states have taken the offensive. They are joining forces to ensure that it is recognised in the energy mix as low-carbon electricity. But there is still a long way to go before all the conditions for its development are in place! I am thinking in particular of the electricity market reform and the financing of investments needed to renew Europe's power plants: the battle (something of an understatement) is raging.

François Goulard believes that the Alliance of 16 nuclear states[3] offers hope. Maybe so, but it will not be easy, because these states do not all agree on the content of the reform or its agenda...

Why not extend it to include civil society, trade unions of course, and stakeholders who are working to extend the life of their power plants, as in Germany and Belgium for example?[4]

[2]Open letter to institutions – In the Supplement of La Lettre des Entretiens Européens – June 2023 – www.entretiens-europeens.org

[3] 16 countries are represented: France, Belgium, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, Hungary, the Netherlands, Poland, Romania, Slovenia, Slovakia and Sweden, as well as Italy, as an observer, and the United Kingdom, as a guest country.

[4] The discussions on the agenda are very revealing of the conflicts between the Alliance's member states and with the anti-nuclear states, which are also joining forces to mobilise anti-nuclear associations (see Claude Turmes in Berlin).

Because in Germany, society is on the move. A majority would like to see the closure of nuclear power stations delayed until after the closure of their coal-fired power stations, scheduled for 2028. And in Belgium, as Marie-Christine Marghem pointed out, action taken has led to the extension of two power stations, opening up new perspectives for nuclear power in this pioneering country.

The future of nuclear power is at stake. Its rejection in Germany is not just ideological or cultural, there are huge underlying economic interests. Germany was hoping to become Europe's "gas hub" and dispatch Russian gas throughout Europe. Replacing nuclear power with gas could prove very profitable! Moreover, the German government had anticipated the demand for gas (driven by the intermittent nature of renewables, which I will come back to later), had committed to Nord Stream 1 and then Nord Stream 2, and had placed men like Schröder at Gazprom... And in Belgium, which had the intention of replacing its nuclear reactors with gas-fired power stations, the current minister is a former member of a law firm that defended Gazprom... a borderline conflict of interest, but we let it happen, when we should have been voicing fierce opposition!

The member states and the EU must create the conditions for public acceptance of nuclear energy. It is not a "neutral" technology, it is a societal choice of public interest that requires commitment on our part... It is a choice that resulted in the Euratom Treaty, created in 1957 at the instigation of Jean Monnet to promote nuclear energy for industrialisation and prosperity. Six countries were members of the treaty at its creation, but its mission has been lost along the way. A number of states are now systematically obstructing decisions that must be taken unanimously.

Nuclear energy is a public good of strategic European interest[5], and Euratom must be reformed to restore its role. This will be difficult with 27 member states, hence the importance of the Alliance, which has yet to win its first battle: have nuclear power recognised as a public good within the EU. But can it do more?

Building permanent structured cooperation

Some Alliance member states want to build a competitive European nuclear industry, sharing projects to pool expenditure and reform market rules to create the conditions for financing long-term investment. This will require permanent

[5] See applications for radioactivity and nuclear energy in industry and services at our Atomic Evening organised by the ASCPE *Open World, Regards Croisés* film society, 24 May 2023.

structured cooperation (PESCO, as in the defence industry). Because as Anne MacLachlan reminded us, the Alliance member states are not all in full agreement. From pro-nuclear Finland, which tends to agree with Germany on a "cautious" reform of the market, postponed until after the European elections, to Spain, which is in favour of phasing out nuclear power but is calling for structural reform of the market as soon as possible.

The conflicting debates in the Energy Council meeting of 19 June were also revealing. There were two issues on the agenda: the renewable energy directive and the reform of the electricity market.

Concerning the directive on renewables, France has succeeded in having hydrogen produced from nuclear electricity included in the law, which requires a 42.5% renewable energy share of European consumption by 2030... a battle won, but which remains to be ratified by the European Parliament and voted on by the Council in late June.

As for market reform, the battle is still raging! The issue debated is that of the financing of existing nuclear assets. Which is a crucial issue if we want to extend the lifespan of our power stations and amortise investments, which in France total 50 billion euros!
But Luxembourg minister Claude Turmes is howling, brandishing the argument of market distortion, supported by Austria and Germany who are going even further and denouncing EDF's failure to comply with the rules on state aid. They appear to also "forget" the enormous distortion of competition from which renewables benefit through unequal treatment: priority on power grids, subsidies and taxes of all kinds, binding targets... to name just a few!

France has taken the offensive. And it is right to do so, because it is in the public interest. It would be in the interests of other states to save the French fleet and EDF too, because the former makes up 50% of the European fleet, and because other European countries such as Poland and Sweden will need to cooperate with EDF if they want to develop their own fleet.

Nuclear is a long-term play, and there is no more time to lose.

One participant stressed the need for urgent decisions if the French fleet is to be saved. She pointed out that the many incentives to developing offshore wind

power in France[6] will have windfall effects and favour the big groups like TotalEnergies and Engie, who will invest massively in it at the risk of saturating actual needs and of the future EPRs arriving too late, with the possibility of simply becoming stranded costs – particularly as there is currently no proof that the switches will take place![7]

What reform, for what objectives?

We are entitled to wonder about the sole objective of lowering electricity prices before the end of the year... because it is less a question of "lowering" prices than of regulating the market to stabilise prices over the long term, as Frank Roubanovitch told us speaking on behalf of consumers, and of creating the conditions for financing nuclear investment and cooperation between companies in the sector to build a European industry. This requires substantial investment, with slow returns, and varying degrees of risk. It will mean mobilising massive public and private funds, guaranteed by the member states.

But it is a volatile, competitive and short-termist market, and state guarantees, equated with state aid, are forbidden. It is ill-suited to the needs of the nuclear industry and has discouraged investment in the sector. Which in part explains the decline in nuclear production in Europe. Under these conditions, opting for more and more renewables – which require a dispatchable energy source to compensate for intermittency – has resulted in a demand for gas that far exceeds supply, causing prices to rise. They have in fact exploded with the drop in Russian gas supply, although the crisis had been brewing for years.

Bearing this in mind, the marginal pricing system (which sets prices by the last source required to meet demand, i.e. gas) has penalised the countries that produce cheaper electricity, either from nuclear power, as in France, or from renewable sources, as in Spain.

The crisis has brought a nuclear power comeback. But the debate is crystallising around nuclear versus renewable energy. It is absurd to pit the two against each other at a time when we need to drastically reduce use of fossil fuels, which still represent 75% of the energy mix in Europe, and 65% in France! And is it not also absurd to want to replace a stable, dispatchable, carbon-free energy source with

[6] See the working paper published on 13 June by the French Prime Minister's General Secretariat for Ecological Planning (SGPE), which sets out its objectives for reducing GHGs by 34% between 2022 and 2030 in order to achieve the EU's targets: from 408 to 270 million tonnes.

[7] It is also astonishing that the electricity consumption scenarios have never anticipated the needs associated with renewed growth and the growth in electrification.

a carbon-free energy source that is intermittent and unable to ensure grid stability? Yet this is what anti-nuclear governments are calling for, preferring gas or coal to compensate for the shortcomings of renewables. Meanwhile, the nuclear states insist on a balance of diverse carbon-free sources, and they are right to do so, because not all sources are equal. Too many electricity-generating renewables have too many perverse effects[8]. They are expensive, and in some countries come up against a problem of social acceptability. The announcement in France of 50 offshore wind farms to generate 40 GW by 2050, in addition to 100 GW of solar and onshore wind power (reduced to 37 GW due to rejection), is not based on any coherent strategy or serious assessment of costs and risks. And the number of demonstrations against projects is growing.

How to increase the social value of nuclear power in Europe?

The Alliance's proposal to produce 150 GW of nuclear electricity in Europe by 2050 (compared with 100 GW at present) is a strong, positive signal that nuclear power should continue to account for 25% of electricity production (contradicting the PINC, which is the Commission's Nuclear Illustrative Programme, which envisages 15%). This means maintaining the existing fleet and building 30 to 45 new large reactors (supplemented by SMRs) and recruiting 450,000 people.

The Alliance's member states will prepare a roadmap for the development of an integrated industry and joint projects. They are calling on the Commission to support the creation of "joint initiatives" and to review its "Net Zero Industry Act", which should recognise innovative nuclear technologies in a manner identical to the other technologies needed for decarbonisation[9].

France has taken the lead in this battle. And it carries a lot of weight, producing 50% of nuclear electricity in Europe and with a fleet of 56 reactors, the 2nd largest in the world behind the USA. Two laws have been passed to accelerate extension of the fleet and the construction of six EPR2 reactors. But this presupposes being able to overcome the challenges of financing, and for this the issue of market reform will prove crucial.
We will be heading the battle, with Poland of course. Michal Kurtyka spoke of an offensive Poland, which explains America's choice for its future fleet, that and the departure of France in 2016... no doubt. In 2013, we organised an *Entretiens*

[8] See *Grammaire pour une transition énergétique cohérente en Europe* (Grammar for a coherent energy transition in Europe) by Claude Fischer Herzog in Transitions & Energies, September 2022.
[9] To be compared with the Inflation Reduction Act (IRA) in the USA, which subsidises the global roll-out of all carbon-free energies produced in the USA.

Européens event with him in Warsaw and Krokowa: EDF Polska was in the running, but no one in the government, PGE or EDF was in a position to pay. EDF left. Weakened in France by its government, which is both a regulator and shareholder, and in Europe by the electricity market and the Green Deal, it could not do everything. It has chosen China, Finland, the UK and Flamanville... to the detriment of Poland. While certainly regrettable, there is nothing to prevent us from now resuming cooperation between our two countries because, as Poland's former climate minister pointed out, "it's never too late".

The EPR is an asset. It will be the first in a series in France, offering us a new fleet of EPR2 reactors, and maintaining France's position of leader in Europe and worldwide. And, I can assure you, the EPR will prove crucial in rising to Europe's nuclear renaissance challenge. SMRs could then be used to complement EPRs according to the needs of local regions and large companies. And for those criticising EDF for under-investing over the last 20 years, let's not forget Flamanville. Admittedly, the plant will cost more than expected. We are talking 10, even 20 billion. But if compared with the 150 billion invested in renewable energies to produce 2.5% intermittent carbon-free electricity and replace stable carbon-free electricity (with the closure of Fessenheim)... it's about time we put things into perspective.

The reform and its tools... changing the rules

The challenges are enormous. Nearly €800 billion will be needed in Europe. We must rebalance the short-term market with long-term strategies, and competition with solidarity and cooperation. And we will need to do this against a backdrop of economic instability and geopolitical and climatic change.

The French government has decided to renationalise EDF, as a way of restoring its sovereignty over the choices that will determine its future. This will be financed through taxation, via the budget. But there are a number of options on the table for financing future power plants: use the public's savings placed in Livret A savings accounts (managed by the *Caisse des Dépôts et Consignations* and the state's ultimate weapon); issue bonds on the market, to be underwritten by corporate investors or even private individuals; or offer financial packages to institutional and private investors, and to local authorities.

But some European countries are in recession and the general context is one of secular stagnation, warns Philippe Herzog. There can be no miracle "just make the state pay" type solution. And the tools do not raise technical challenges, but

socio-political ones. I am delighted that the Commission has proposed to recognise the contract for difference (CfD) technique[10]. As we have seen, it is in the midst of a political battle between governments, with some refusing to use it for nuclear assets to extend the life of power plants in France.

A number of points need to be clarified. We have experience of the CfD at Hinkley Point. It is expensive. Can we afford these costs? And can the state cover the risks alone? We would like the CfD to be combined with the RAB (regulated asset base). As Antoine Bizet and Elena Burdykini explained, the RAB would be cheaper for new reactors, because by allowing investors and consumers to be involved in projects from the design stage, we would avoid the mass of financial costs that were required under the CfD at Hinkley Point. Elena added that the banks would refuse to pass the risk on to consumers. That said, it seems important that both electro-intensive companies and local authorities be allowed to be financial partners in the project[11]. On the other hand, and in the same spirit, the European Union will have to recognise the need for PPAs (over-the-counter contracts).

France has benefited from a regulated system with ARENH, but as Antoine Bizet pointed out, this may have been detrimental to EDF when it had to sell more and more, and more cheaply, to competitors during the crisis. Should we keep it? And how can production costs be taken effectively into account? What will happen to the CfD scheme?

All these issues need to be clarified... and long-term contracts need to be understood for what they are: a structural reform.

Nicola Pesaresi has told us that the Commission will ensure compliance with competition rules. But the rules as they stand penalise nuclear power, for which the CfD alone would constitute less of a structural reform and rather a derogation. The Commission is passing on the entire burden of public guarantees to member states. It has affirmed that each source will be treated without discrimination and with the benevolent neutrality of national decisions... but how can this be true when renewable energies continue to have priority on power grids, receive state aid, and benefit from ever higher binding targets.

[10] The CfD is a contract defining a price corridor for the sale of electricity on the wholesale market, with a floor price and a ceiling price. If the selling price on the European market is lower than the floor price, the government pays the difference to producers; if it is higher than the ceiling, it recovers the difference and redistributes it to consumers.

[11] Thanks to the taxonomy, secured after a struggle, private investors will be able to include their investments in their balance sheet with European “sustainable finance” labels.

The rules must evolve to allow greater solidarity between states while respecting the diversity of sources, and to encourage cost-sharing and cooperation between companies and states in order to reduce costs, particularly the cost of risk, which is too high. Or will nuclear power have to be removed from the market in the same way as renewables? This is not what we want. *Entretiens Européens* has proposed implementing the Lisbon Treaty, which established the joint responsibility of member states and the EU in ensuring that SGEIs (services of general economic interest) are carried out, in this case for nuclear electricity.

How to develop a European industry?

Poland has chosen the USA, and Hungary has chosen Russia with the Commission's approval. I am personally convinced that cooperation is possible throughout the chain, both upstream and downstream of reactors.

France has an industry of 2,600 companies. Many are in a position to invest, alongside EDF, in engineering, turbines and other uranium enrichment and conversion technologies, and upstream in spent fuel recycling and nuclear waste management.

The world's scientific community is unanimous in its support for deep geological disposal solutions, and in Europe these are taking shape in Finland, Sweden and France. These need to be shared. You need only visit the Andra facility, Cigéo, to understand. I led a delegation of 20 companies to the Orano Tricastin industrial platform on 24 May, and it is in this same spirit that I will be taking a dozen young engineers currently in training to Bure on 3 July – 500 metres underground to walk through the revolutionary concrete galleries and see the chambers designed to hold waste packages once they have been cooled, vitrified and placed in containers.

But even if the technologies advance and we figure out the best possible financing plans for investments, a crucial condition for public acceptance of nuclear power will be an ambitious training policy, to prepare people for nuclear professions. A subject we will be covering at our next *Entretiens Européens* conference. So let's talk in November!

Claude Fischer Herzog
Paris, 20 June 2023