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70 years on, it's time to reinvent the ECSC

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UPSET BETWEEN BERLIN, BRUSSELS AND LA CORUÑA

On 16 May 2022, in the Radialsystem conference centre in Berlin, a chair remained forlornly empty. The German Minister for Education and Research, Bettina Stark-Watzinger, inaugurated the conference "*Green Hydrogen for a Sustainable European Future*" promoted by the German government, before handing over to her Italian counterpart, Cristina Messa, and then to European Commissioner Mariya Gabriel. The empty chair was that of the French Presidency of the European Union which, despite strenuous effort on the part of the German government, did not wish to delegate a representative. In the Chancellery, the mood was one of great tension.

Nearly 100 executives representing 31 gas transmission and storage operators (TSOs) from 28 European countries met with the European Commission on 7 June 2022 in Brussels. It was time to present the latest version of the [European Hydrogen Backbone](#) (EHB), an initiative launched two years ago by the German company OGE. On the agenda was the unveiling of an ambitious plan to build 28,000 km of hydrogen pipelines across the continent by 2030.

One point of interest was a dotted line linking Barcelona to Livorno - to connect the Iberian Peninsula to the rest of Europe, bypassing France, whose opposition to cross-border green hydrogen infrastructure is no longer a mystery.

A few months later, on 5 October 2022 in La Coruña, Pedro Sanchez, president of the Spanish government, hosted German Chancellor Olaf

Scholz, together with some fifteen ministers. On the agenda of this summit: the European energy crisis and the measures that must be taken to strengthen the continent's supply security and European solidarity.

One proposal stood out: to strengthen gas interconnections to allow liquefied natural gas (LNG) arriving in Spanish ports to relieve a German industry that is on the verge of suffocating - and to pave the way for the implementation of green hydrogen transport infrastructures (EHB).

As soon as the German-Spanish summit was concluded, the response from Paris came as a sharp, undiplomatic blow: the MidCat gas interconnection project across the Pyrenees was unnecessary. France intended to fully exercise its sovereign prerogative in energy matters and to protect the uniqueness of its nuclear electricity model.

The final act took place on 19 October 2022. At the last minute, the Franco-German Council of Ministers, scheduled for the 26 October, was postponed. The next day, the matter was settled: the French president, together with the Spanish and Portuguese Prime ministers, agreed to the construction of an undersea green hydrogen pipeline connecting Barcelona to Marseille (BarMar) and up towards the Benelux countries and Germany via the Rhone valley.

While Berlin has been modestly triumphant, Teresa Ribera, the Spanish Minister for Energy Transition, is jubilant, taking no offence at French warnings about the - supposedly long - time it will take to implement such a project. With the resolution of

the Pyrenean obstacle, the EHB will see the light of day and Spanish - and soon North African - hydrogen will be in a position to feed European industries.

This political flare-up in Europe had long-standing roots since there has never been a European energy policy.

THE ECSC'S UNFULFILLED PROMISES: DIVERGENT ENERGY POLICIES

Just over 70 years ago, on 23 July 1952, the institution that was to serve as the matrix for European integration was born: the European Coal and Steel Community (ECSC). Its creation had been announced by Robert Schuman, the French Foreign Minister, in his historic declaration of 9 May 1950:

"The French government proposes to place all Franco-German coal and steel production under a common High Authority (...). The pooling of coal and steel production will immediately ensure the establishment of common bases for economic development, the first stage of the European Federation."

The ECSC had the immense merit of establishing a powerful, balanced institutional system (High Authority, Council of Ministers, Parliamentary Assembly, Court of Justice) which, turned into the European Economic Community in 1957 and to the European Union in 2009, ensuring, despite recurrent crises, the political cohesion of a disparate group of 27 Member States and 450 million citizens, that were finally reconciled after centuries of conflict.

On the other hand, neither the ECSC nor Euratom (European Atomic Energy Community, launched in 1957), its nuclear counterpart, have played the role expected by the founding fathers in driving a common energy policy. Energy is a commodity unlike any other: it remains inseparable from the sovereignty of states and the legitimacy of their power. It is also argued that, unless there is a structural and catastrophic crisis, there is no real reason to share energy sovereignty.

In the 1950s, however, the threat of scarcity faded, and the energy supply of a booming continent no longer seemed to be a problem. A 'golden age' of energy abundance began. While coal deposits are now rapidly depleting in most European countries, the energy mix has been bolstered by successive waves of efficient and competitive energy: hydroelectricity, nuclear power, oil and gas.

While some countries such as Belgium, following the British model, quickly embarked on the development of a large nuclear fleet, France, rich in its colonial empire and eager to compete strategically with the United States and the Soviet Union, chose oil and gas alongside hydroelectricity.

On 10 January 1957, Guy Mollet, the then President of the Council, signed the decree creating the *Joint Organisation of the Saharan Regions (OCRS)*, which placed the resources of the Sahara under the supervision of mainland France, declaring that: *"France is and remains a great power. It will mobilise its forces to achieve the Saharan miracle. The great wealth of coal, iron, oil and natural gas in the southern territories will be developed..."*. When Algeria gained independence in 1962, France retained economic control of the Sahara and its hydrocarbons until 1968.

Divergence in the European energy mix was quickly established. Whereas France and Germany had similar supply structures in 1950 (predominantly coal), Guy Mollet's strategic choice - fully confirmed by General de Gaulle - gave hydrocarbons a dominant place in the French mix in 1970 (70% of final energy), much more than in Germany's (52%).

The 1973 oil crisis therefore affected France much more severely, causing large trade deficits, high inflation and a depreciation of the *franc* - thus opening a long period of economic divergence between the two countries.

The French nuclear programme, a brilliant industrial success story initiated by French Presidents Georges Pompidou (1969-1974) and Valéry Giscard d'Estaing

(1974-1981), was born of this experience. It took off at a time when most other European countries were freezing their own programmes one after the other, following the accidents at Three Mile Island (1979) and Chernobyl (1986).

Intelligently mobilising American (Westinghouse) and Franco-American (Framatome) atomic technology, Belgian (Empain-Scheider) engineering and dollar bond financing, EDF built a fleet of 59 reactors in two decades. This led to the share of nuclear power in France's final energy consumption rising from 1% in 1970 to 17% in 2000, three times higher than in Germany, with hydrocarbons still largely dominant in both countries.

The progress of European integration, the implementation of the single market and the advent of the euro raised the question of a common European energy policy.

THE FAILURE OF EUROPEAN ENERGY POLICY AND THE COLLAPSE OF INVESTMENT

Strategic decisions regarding their energy supply have remained the jealous prerogative of the states. The European authorities have therefore tackled the issue from two angles which fall within their remit: the internal market and the fight against climate change. The strategy has mainly focused on opening up and liberalising the markets on the one hand, and encouraging the development of renewable energies on the other.

A directive published in 2003 required Member States to open their markets to competition (2004 for companies, 2007 for individuals) and to dismantle any former energy monopolies. Commercial activities (production and supply) and natural monopoly infrastructures (transport and distribution of gas and electricity) were separated and became regulated activities, otherwise known as *unbundling*.

At the end of 2008, the European Union adopted an "energy-climate package" which required Member

States, without any binding measures, to achieve a 20% share of renewable energies in their energy mix by 2020, to reduce their CO2 emissions by 20% and to increase their energy efficiency by 20%: this is the famous 3x20.

At the same time, the European states opened up their energy markets to imports, particularly of natural gas, whose prices on the world market fell sharply from 2008 onwards due to shale gas in the United States and the development of LNG production, particularly in Qatar.

Long-term contracts were signed, mainly with Russia, in which E.On and GDF-Suez were prominent. The same companies set up a joint subsidiary with Gazprom in 2015 to build the Nord Stream 2 pipeline linking Russia directly to Germany. In two decades, the European Union's gas imports jumped by 50% to 3,220 TWh in 2021.

In the specific case of gas, the situations of France and Germany, and of other European countries, do not differ much: who knows that France's 474 TWh of gas imports in 2021 represented 131% of its nuclear electricity production?

Finally, some countries wanted to "milk the revenue" generated by the existing assets: For example, in France, EDF reduced its investments from the end of the 1990s onwards. While electricity prices for industrial and private consumers were comparable in France and Germany in 1995, successive French governments, ignoring the prophets of doom who saw a "nuclear wall" looming (decommissioning, waste storage, new capacity), took advantage of the transient cash flows generated to impose on EDF a 30% reduction in its regulated tariffs between 1996 and 2008, creating a yawning gap between France and Germany.

All in all, all of the policies followed for 20 years, both at European and national level, have resulted in a general decline in investment in energy production in Europe, which has proved highly damaging.

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Deregulation has had an unforeseen and deleterious effect: the disempowerment of actors.

By ending historical monopolies, the opening up of the markets and unbundling have broken the rationale of the system and the capacity to invest in the long term (especially in times of economic downturn), which are essential to ensure long-term security of supply, which is key (along with competitiveness and decarbonisation) to any energy policy.

Stop-and-go strategies in renewable energies (mainly solar and wind) have not yielded conclusive results either. After a strong start until 2011 - fuelled by poorly calibrated and very costly feed-in tariff systems, and due to drastic restrictions on the licensing of installations - investment in these sectors has structurally fallen (-30% in 10 years), leaving the European Union far behind China and the United States.

In the meantime, global energy markets have undergone a fundamental shift. The drop in oil prices at the end of 2014, followed by increasing pressure from financial markets on the fossil fuel chain following the Paris climate conference (COP21), caused a 60% drop in upstream oil and gas investments in one fell swoop, with no foreseeable rebound, unlike in previous cycles: nearly \$5 trillion in investments have been missing since 2015.

The Covid-19 pandemic and the temporary depression in global energy demand have masked the inevitable: Europe has neglected to invest in its supply security for decades, and is facing the prospect of a long (at least until the end of the decade), painful winter. The war in Ukraine has been the last straw, accelerating a historic energy crisis whose causes go back a long way.

EUROPE FACES A HISTORIC ENERGY AND ECONOMIC CRISIS

On 2 September 2022, the announcement came as a shock. The Durelex, French glass factory, whose brand has cradled generations of children, announced

the forthcoming closure of its factory as the steep rise in gas and electricity prices made its industrial activity uneconomic. Soon the declarations followed one another: ArcelorMittal closed its Bremen blast furnaces, Fertiberia its ammonia plant in Andalusia. At the beginning of October 2022, 10% of European steel production capacity, 50% of aluminium production capacity and 70% of fertiliser production capacity had been shut down.

S&P Global announces a 40% drop in automobile production in 2023. Decision-makers are overwhelmed by the dizzying prospect that whole swathes of European industry may be on the verge of disappearing.

The sharp rise in the price of fertilisers and other inputs is having a dramatic effect on the agricultural chain. Lying at nearly 11% on average in September 2022, [inflation](#) in Europe is seriously threatening the purchasing power of the poorest households, with the social and political implications that we can imagine.

How did we get to this point? As at other times in history (1973, 1990, 2000, 2008), the combination of dynamic global energy demand colliding with the limits of insufficient and inflexible supply (sometimes affected by geopolitical events) has resulted in very rapid price shifts.

Demand, squeezed by the pandemic, rebounding from the end of 2020, faces a situation of tight supply due to a long period of underinvestment, a phenomenon particularly evident in the case of natural gas.

In the US, wholesale gas prices tripled between January 2020 and October 2021 to \$17/MWh - equivalent to the quoted price a year later. The increase has been even more marked in Europe, which is highly dependent on imports (particularly LNG), where prices have increased sevenfold over the same period to reach €100/MWh - a level to which they returned in October 2022 after the period of increase following the invasion of Ukraine.

The rise in the price of gas, the fuel used by many power plants, is logically reflected in electricity prices, even though “baseload production capacities” (especially coal and nuclear) are suffering from two decades of under-investment. This is the case in Belgium and France, where the decline in nuclear power production (-30% since 2015) is intensifying with the ageing of the fleet, which is approaching the fateful 40-year mark.

The suddenness and seriousness of the crisis have stunned European political and economic decision-makers. Calls for sobriety, which seem derisory in the face of the enormity of the challenges, are multiplying. An avalanche of [emergency measures](#) has been announced, most recently at the European Council on 20-21 October 2022.

To date, €500 billion in aid has been announced by European governments, which, ironically for the climate, are subsidies for imported fossil fuels (natural gas, fuel oil, petrol and diesel). Some argue for a suspension of the European gas and electricity markets, forgetting that if the adjustment of supply and demand can no longer be achieved through prices, it will be achieved through quantities (rationing, load shedding, etc.), potentially causing economic chaos.

Forgetting that energy infrastructure is built over decades, others are proposing to step up investment in renewable energy and nuclear power. Do they realise that the equivalent of five times the photovoltaic and wind power capacity built in Europe in 20 years, or ten times the French nuclear power plant, would have to be commissioned to replace European natural gas imports alone?

One might conclude from this succession of events that Europe's energy, economic and political future is totally blocked. But this is not the case.

THE GREEN HYDROGEN REVOLUTION AND THE URGENT NEED FOR AN ENERGY UNION

The European Commission presented its [RePowerEU](#) plan on 18 May 2022, in response to the energy crisis; few observers have noticed an objective that would seem anecdotal: 20 million tonnes of green hydrogen

in 2030, half of which would be produced in Europe and the other half imported. Perhaps the journalists present should have been given a calculator: we are talking about 780 TWh, a significant share of European natural gas imports!

This ambition (and in particular its import component) was immediately taken up by the German government in the strategy that the Minister of Education and Research presented at the Radialsystem event in Berlin. The same week in Barcelona, the Spanish Minister for Energy Transition, Teresa Ribera, announced before an audience of ministers and business leaders from all over the world that Spain would focus its energy strategy largely on green hydrogen.

Tired of the constant announcements (has it not been said that hydrogen is a very promising form of energy that is destined to remain so?), many observers would be tempted to see this as nothing more than hype. They would be wrong.

In several European countries, green hydrogen hubs are being built, some of them reaching 10 GW (the equivalent of as many nuclear units) and are due to come into operation in 2025: dedicated competitive renewable energy production (solar in the Iberian Peninsula, wind in the North Sea), installation of large-scale electrolysers, hydrogen transport by pipeline (European Hydrogen Backbone), use of hydrogen as a replacement for coal, gas and oil in the production of steel, fertiliser, glass, electricity, heat... and mobility.

At €60/MWh the most competitive projects no longer need subsidies: the increase in the gas and electricity markets has already achieved its goal. Who will want to buy fossil gas when the decarbonised alternative is cheaper?

European production will have to be supplemented by imports, in reasonable volumes, mainly from the southern Mediterranean, easily accessible by pipelines that could be built before 2030, partly along existing pipelines. Already, some major European energy companies have signed agreements

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in Morocco, Mauritania and Egypt for tens of GW of projects.

The European Investment Bank (EIB), the European Union's arm to finance infrastructure, is also supporting the governments of these countries in this perspective.

The idea of Euro-African solidarity is thus emerging, in which an Africa rich in resources could come to the aid of a Europe in crisis - and accelerate its own industrial, economic and social development, while

preserving the climate and developing access to water via desalination.

Such a project can and must mobilise all Europeans. The hydrogen revolution offers Europe a historic opportunity: to re-found itself around an energy Union, finally fulfilling the promises made by Robert Schuman 70 years ago.

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Chairman of Hydeal

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