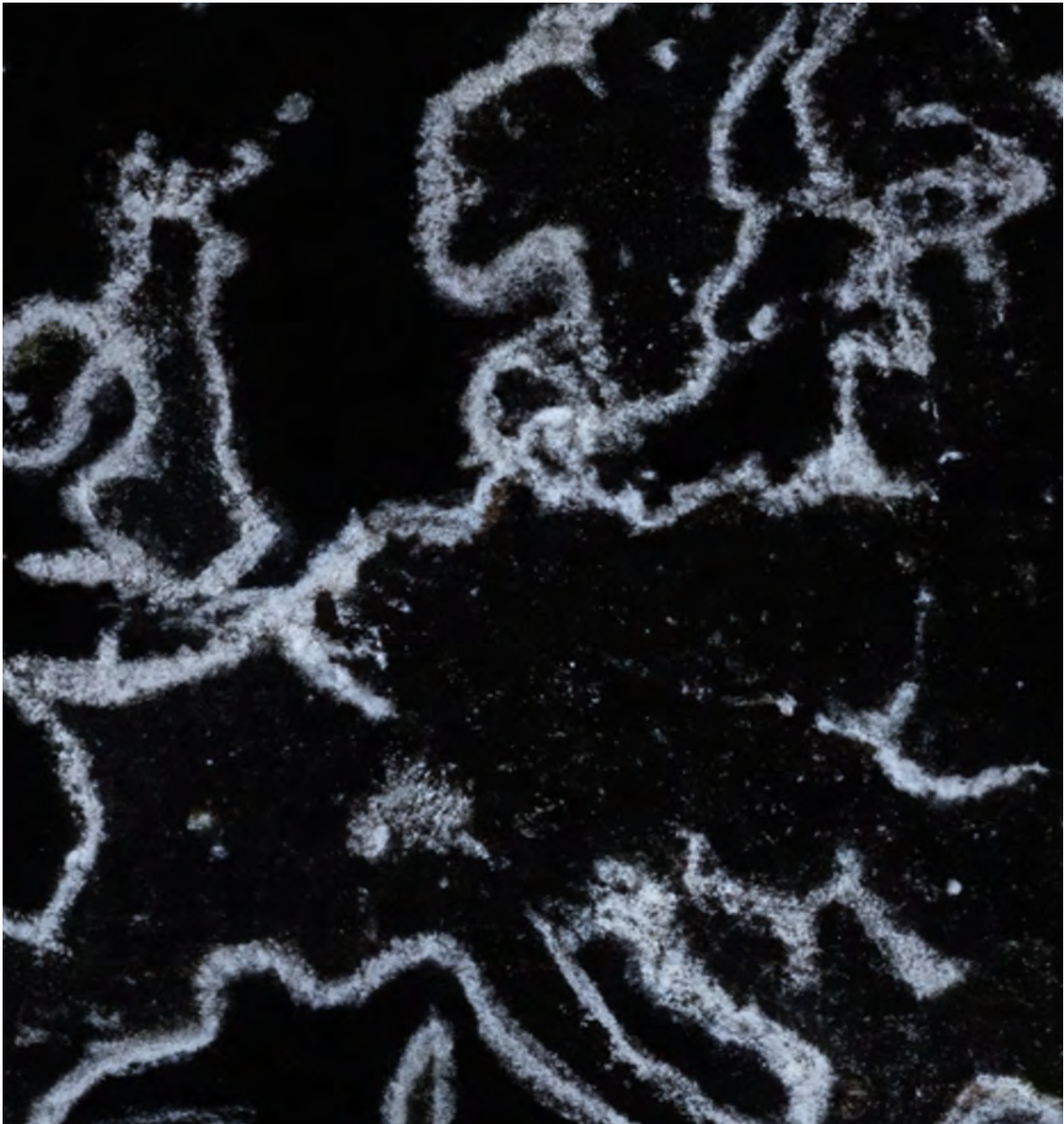


LIGHTS OUT

Is the EU failing on energy policy?



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A REPORT BY MCC BRUSSELS

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1. Introduction

Let's first remind ourselves of a very simple truth: the modern world is built on energy. It would be almost impossible to find a single action undertaken right now across the whole EU that would be possible without a plentiful supply of energy. Not just heating our homes or charging our phones, but our roads, schools, hospitals and even our political institutions are the product of an era in which energy was available in relative abundance. This is a blessing to which it is almost impossible to do justice. This is Promethean fire writ large. Access to energy at this scale is perhaps the most impressive achievement of the modern world.

But such an achievement is a fragile one too. It relies on serious and sustained attention to the energy system, and on the right policies, technologies and attitudes that promote sensible investment in and maintenance of this almost unmatched good. When the system is infected by politicised goals – such as the logic of environmentalism – the result is a failure to secure the energy we need. This report explains this interplay in extensive detail.

More precisely, this report argues that the EU's focus on the dogma of environmentalism has seriously distracted it from the foundational question of how to ensure the EU has enough energy. In fact, it is worse than just this: endless policy proposals, meetings and strategies have left Europe dangerously close to being unable to heat, light and power itself.

It needn't be this way. Until relatively recently, France and Germany offered a practical example of how to both reduce emissions and create the plentiful energy that modern industry and modern life more generally require. This example was of course widespread use of nuclear energy. The fateful move away from nuclear in the case of Germany, and decades of underfunding of the system in France, have left these two giants poorly positioned to respond to the energy shock that is one of the major outcomes of Russia's invasion of Ukraine. The situation elsewhere in the EU is perhaps more dire still.

As this report details, across almost every aspect of energy policy the EU has actively

hampered the development of a modern, energy-rich system. This is true from the question of generation to the issue of imports, or from the infrastructure of energy transmission to the aspirations of EU citizens for affordable bills.

In fact, it seems that the EU actively disagrees with what many would assume to be the common-sense goal of energy policy: producing and circulating more energy. It sometimes seems that the EU operates on the opposite assumption: that the goal of policy is to reduce energy generation and energy demand. Although it is rarely articulated with this level of frankness, the fundamental logic of the 'Green' energy movement is energy austerity.

Time and again, the response of EU elites to their manifest failure to secure reliable energy in the quantities needed for modern life has been to exhort EU citizens to use less. Whether accompanied by vague promises to increase efficiency (like the fruitless obsession with insulation), or more forthright demands for energy saving (like reducing car use), the default response of EU elites to their failure to secure reliable energy is to shift the blame on to ordinary people. The desires of normal people for a rich and happy life are recast as dangerous habits destined to lead us to ecological catastrophe.

“Access to energy at scale is perhaps the most impressive achievement of the modern world. But it is a fragile one.”

What's more, as this report details, the practical effects of the 'Greening' of EU energy policy have been a perverse reliance on fossil fuels. This is not just true of crisis situations like today's, when countries across the EU have scrambled to re-start burning coal, but more broadly. The availability of Russian gas has been the unstated premise of the EU's efforts to reduce emissions. The effects of this are of course only now being felt.

In response to these questions, the EU has recently launched several grandiose initiatives. Fit for 55 brings together efforts around reducing emissions by 2030,

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REPowerEU looks to accelerate the drive to save energy and the shift to renewables, while the Green Deal Industrial Plan will attempt to scale-up manufacturing capacity for net-zero technologies. It does not take an expert to notice that all these initiatives are united by their commitment to the very environmental policies that have long impeded the production of the energy the EU needs. But even less remarked upon is how difficult the continual and dazzling wave of plans, acronyms and buzzwords coming out of Brussels makes it very hard to grasp exactly what the EU is trying to do.

This report is above all a plea for far greater democratic involvement in the question of energy. The EU public are largely absent from the issue of energy – except when certain unrepresentative environmental groups are invited to provide EU policies with a veneer of democratic legitimacy. In the absence of genuine public discussion and debate, EU energy policy has tended to become ever more insular and ineffective.

The argument that follows is not an indictment of the aspiration for cleaner energy. In fact, a low-cost, low-carbon and plentiful energy system is genuinely within reach for EU countries. But the unfortunate correlation of environmentalism with energy austerity has hampered this worthwhile goal. The task for us all, right across the EU, is to seize the many opportunities and innovations that exist, or will soon exist, to create a modern energy system.

We have a chance to seize again Promethean fire to power a continent. This report is an invitation to debate about how to seize that chance.

2. EU Policy: more performative than effective

2.1. The EU energy mystery

It's hard to guess how much, somewhere in the EU, the man or woman in the street knows or cares about official EU policy and practice on energy. Many are aware of national developments, which are central to everyday life: prices for gas, electricity and transport fuel, for instance. Many can also agree that such national energy issues are, also, partly affected by international developments. Sometimes using new technologies, engineers have achieved a modest but important integration of energy networks across Europe's national borders. Energy in Europe, like its close cousin transport, nowadays has more of a pan-European dimension to it.

But all that is something quite different from the EU citizen recognising, being familiar with, supporting and enriching policy on energy as written about, voted on and enacted in Brussels.

EU energy policy is mysterious, and the reason is simple: the unspoken secret of the Brussels approach to energy is that it is more performative than it is effective.

The job of the EU's Directorate-General for Energy (DG ENER) is to develop and implement policy. It is supervised by Commissioner Kadri Simson, who has been in post since December 2019. DG ENER issues papers, agrees budgets, and holds press conferences. But outside the 'Brussels Bubble' and among ordinary people, one finds little to detect its influence, or concrete results of steps it is taking to avoid the next energy crisis.

After the Kremlin invaded Ukraine on 24 February 2022, and after Gazprom started curtailing shipments of gas through Nord Stream, its biggest European pipeline, EU Member States moved to find alternative sources for gas, especially Liquefied Natural Gas (LNG). For many commentators, the diversification proved surprisingly successful. Yet while the volume of gas piped from Russia to the EU declined sharply in 2022, bringing Moscow's share of EU gas imports down from 40 to less than 10 per cent, Russia increased its exports of LNG to the EU by 12 per cent, reaching their highest in three years. In 2022 the largest LNG exporters to the EU were the

US (42 per cent), Qatar (16 per cent) and Russia (11.5 per cent).¹



Kadri Simson, European Commissioner for Energy.

The new gas deals struck around both LNG and pipelines had little to do with Brussels. German Chancellor Olaf Scholz scrambled to solicit LNG from Senegal.² Having already received a first shipment of LNG from Nigeria, Poland sent President Andrzej Duda to visit Lagos in search of more gas; he also stopped off in Côte d'Ivoire and Senegal.³ For its primary source of gas, Italy swapped Russia for Algeria, taking gas via Tunisia and the Trans-Mediterranean pipeline. Italy also indicated that it would like more gas imports from Azerbaijan, via the Trans Adriatic Pipeline.⁴

Back in 2018, the Commission declared a lofty ambition to create a climate-neutral EU by 2050.⁵ On 14 July 2021, it presented proposals – dubbed 'Fit for 55' – on how the EU should reduce net emissions of greenhouse gases (GHGs) by at least 55 per cent on 1990 levels. But nearly two years later, these worthy resolutions count for little. To get round Russia and cut new deals on gas, it has been every Member State for itself.

2.1.1 EU energy policy as a Black Hole

EU-wide energy policy does not radiate the heat of democratic participation, generated

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by fierce collisions from different angles. As a result, it has difficulty getting implemented. In fact, EU energy policy forms something of a Black Hole: the gravity of its content is so intense, everything tends to be sucked into it, so that little light or clarity can escape. It is a dark place.

EU energy policy isn't just a Black Hole of documentation, repetition, legalese, complicated file names, missing dates, obscure numbering systems and ineffective search routines. EU policy on energy is also, as we shall see, a Black Hole for memory: few now can or want to recall the fitful history of EU actions in the field. Meanwhile, who can honestly say they know what EU policy on energy is, beyond its familiar homage to environmentalism?

It bears repeating that energy is utterly central to everything we do. Given its importance, it is reasonable to expect that EU energy policy – at least in outline – should be a matter of common knowledge. But it is not.

A serious European energy policy means debating the primordial issues of energy supply. These include:

- **How energy is sourced:** What should be the 'energy mix'? Which sources should be expanded, and which reduced? What should be the balance of emphases for choosing sources – between cost, reliability, security, ease of transport and sustainability?
- **Where energy is sourced and generated:** How much energy should be imported? In what form (piped gas, liquefied natural gas, electricity)? Which countries will make good partners in energy? How should energy be moved across and outside of the EU?
- **Why energy is generated:** Who should benefit from energy production? Whose needs should be prioritised? What, exactly, is the purpose of energy – to lead a good life, a rich one, or a low-carbon one?

These fundamental questions receive little attention. As a result, EU energy policy is beset by confusions, misunderstandings, and a basic lack of quality information and analysis on which to base decisions.

2.2. Here be dragons – maps of EU energy systems

The murkiness of EU energy policy can be illustrated by the absence of publicly available, basic information about the EU's energy system. Compared to the rich, detailed information we are all used to in the age of infographics, understanding of the EU energy system resembles more a map from the middle-ages than one from Google Maps. The gaps, unanswered questions and lurking dangers are like those dangerous places marked 'Stay away – here be dragons!'

Figure 1 (p.13) shows the European Commission's current attempt to map the EU energy system.⁶ The Commission says that its Transparency Platform is 'a public information system available to every EU citizen'. But in the best traditions of the Black Hole, the Platform is itself not very transparent.

Alternatives exist: for example a map, published by the European Network of Transmission System Operators for gas (ENTSO-G), titled 'System Development Map'.⁷ Yet EU energy policy could surely gain in coherence and prominence if the Commission would properly work up and publish, complete with commentary, a series of intelligible, numerate, interactive and animated maps of energy networks past, present and future, their costs, capacities and so on.

A serious European energy policy means debating, choosing between and planning different network layouts for gas, oil and electricity over the next 5-20 years. At issue is not just an attenuated supply of gas from Russia or an expanded one from the Middle East, but every kind of network from Africa, Eastern Europe and Central Asia. After the imbroglia with Russian gas, Europeans need to know who their continent's partners are in energy.

Part of the purpose of this White Paper is not just to critique EU energy policy, but also to outline some reasonably pragmatic alternatives to it. Right away, then, we recommend investment, small but telling, in better maps of European energy networks, both existing and planned.

2.3. The fundamental question: energy supply

This coming winter or next, EU Member States could meet with blackouts. Last year,

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we were told to practice energy rationing. To beat the Kremlin and save the planet, Germany stopped lighting its public buildings at night, the Netherlands urged showers of no longer than five minutes, Spain insisted that thermostats could run no higher than 19°C, and in France a campaign for 'energy sobriety' began: it will stretch to 2024.⁸ Meanwhile, on the industrial side, Germany's government paid factories to do without gas, causing enough shutdowns to make Stefan Schneider, an economist with Deutsche Bank, opine: 'When we look back at the current energy crisis in 10 years or so, we might consider this time as the starting point for an accelerated deindustrialisation in Germany'.⁹ Since then, the world's largest chemicals producer, BASF, has been forced to cut 2600 jobs, and thousands of other posts have gone, and the German economy has stagnated.

The International Energy Agency (IEA) celebrates this attenuation of demand for energy, noting: 'natural gas demand in the European Union fell in 2022 by 55 bcm, or 13%, its steepest drop in history'¹⁰. But it did not just come about because of mild weather, fuel switching out of expensive gas, or measures to improve energy efficiency. It was mainly to do with closing factories, lowering thermostats and other restraints. Those restraints also apply to other domains such as road transport. Almost unnoticed, for instance, the EU decreed last June that, in part to protect Europeans from climate change, all new car models must have Intelligent Speed Assistance, which will engage a 'pedal restoring force' to try to stop drivers exceeding speed limits.¹¹

Rationing, a kind of self-censorship in energy consumption, hasn't and will not solve the EU's energy deficit. Nor will the case for belt-tightening sweep all before it. It will also look too convenient simply to lay the blame for any further shortages of gas in the EU, or for the high prices that could be demanded, at the door of Vladimir Putin. And such shortages won't easily all be put down to Asia, eager though it is to buy gas. So long as these key issues aren't much bothered with, EU energy policy will not make much sense.

The European Commission likes to shrug off responsibility for energy to others. But this does not resolve things. The IEA is right that the EU has made significant progress in reducing reliance on Russian gas. But as its executive director, Fatih Birol, has said, the EU 'is not out of the danger zone yet'.¹² Even

before Putin moved against Kyiv, in 2021, the EU's reliance on imports for its supplies of fossil fuels increased by 0.7 per cent – to 85 per cent. Reliance on imports was 89, 96 and 42 per cent for gas, oil and coal respectively.¹³ Russia's grip on these imports was, respectively, 37, 25 and 20 per cent.¹⁴

The fundamental question facing the EU in energy is that demand for it is unmatched by domestic supply. Table 1 (p.13) records overall consumption of primary energy in the EU over 2011-2021¹⁵. That consumption represents total energy demand within the EU, covering consumption by the energy sector itself, losses during transformation (for example, the transformation from oil or gas into electricity), losses in the distribution of energy, and final consumption by end-users. Measured in exajoules, the figures have dropped – but only from 64 to 60 exajoules.

"The fundamental question facing the EU in energy is that demand for it is unmatched by domestic supply."

The figures represent a decline of just under six per cent. The low numbers for 2020 and 2021 reflect the Covid lockdowns of those years. In other words, over more than a decade, the EU has made barely a dent in primary demand for energy. Despite continued deindustrialisation, all the after-effects of the financial crisis of 2007-8, all the EU's drives for energy efficiency and energy saving since then, and millions of workplaces curtailing operations during Covid lockdowns, the EU's demand for energy remains insatiable.

In the face of this evidence, the EU still hopes to cut demand through what it calls 'demand side flexibility'. Here homes, offices, hospitals, schools, vehicles and industries could 'shift and shed energy consumption to reduce their energy demand in peak hours, when electricity is mainly produced by gas and prices are high'.¹⁶ Indeed, in this cause Commissioner Simson has recently given a ringing endorsement for our old friend, smart meters, insisting that 'consumers could greatly benefit from the right to have multiple meters. Being able to choose separate suppliers and contracts would allow the best deal for different consumption patterns'.¹⁷

Yet this misses the point. Demand reduction, as well as patently failing to work, is

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regressive: it asks people to make do with less. Prices will only fall when we produce more. The key, therefore, is to secure and generate more energy. The supply of energy will remain the key problem for years to come.

Sadly, in the EU, the production and distribution of energy suffer from low productivity. Though international comparisons are difficult, it is certain that the EU's overall competitiveness in energy is poor by global standards. Gas prices in the EU, for instance, are much higher than they are in the US. Nor does the historical record reassure.

From the 2007-2008 financial crisis through to 2016, at least, Germany alone maintained an appreciable growth of total factor productivity (TFP) in its electricity and gas sectors – and that was only 1.1 per cent a year. For most EU nations, year-on-year growth in TFP was negative, and much more negative than it was in the US: the figures were –7.4 per cent for the Czech Republic, –3.9 per cent for France and Finland, a still substantial –2.8 per cent for Sweden, and –1.5 per cent for Austria. For America, the negative annual growth in power and gas sector productivity was 0.96 per cent.¹⁸

“Demand reduction, as well as patently failing to work, is regressive: it asks people to make do with less.”

Simson's smart meters are not about to return EU energy productivity to where it was, let alone to where it needs to be. As a result, even sluggish economic and infrastructure growth in the EU, together with the continued motorisation of personal and freight transport there, will make supply the key problem for EU energy for years to come. Prevailing on Europeans to manage their demand down simply won't cut it.

2.4. Asleep at the wheel

Compared with the buoyancy of demand for energy in the EU, dynamism on the supply side is far from evident. Germany rejected nuclear power in 2011. It grew capacity in wind until 2017, but then backed off, preferring to resume its decades-long pattern of reliance on Russian gas. For its part, France banned fracking – also in 2011. Denmark and Bulgaria did the same in 2012,

the Netherlands in 2015, Germany in 2017 and Spain in 2021. Sweden was not keen on fracking for economic reasons. In Poland, returns from fracking were poor. Instead of nuclear power and fracking, then, Europe placed a growing reliance upon intermittent sources of electricity – wind turbines and photovoltaic panels.¹⁹ The outcome is, as the IEA noted at the end of last year:

*'If pipeline imports to the European Union from Russia drop to zero in 2023 and Chinese LNG demand rebounds to 2021 levels, then the European Union faces a serious supply-demand gap opening up in 2023.'*²⁰

How has the EU got here? The first reason is familiar: too much unthinking reliance on Russian gas. The second, though, is too rarely acknowledged: the failure to exploit other sources of energy.

2.4.1 Unprepared on gas

The EU was remarkably unprepared for the rise in demand for energy, and especially demand for gas, that accompanied the world's recovery from Covid. European gas prices surged to all-time highs as early as 1 October 2021, more than four months before Moscow invaded Ukraine.²¹ By the middle of that month, the International Monetary Fund registered the price spike.²² Yet the EU paid little attention. It was more concerned to intervene at COP26, the UN Conference on climate change held in Glasgow that December. However, according to one account of the conference, the feeling among Green groups, diplomats, observers and allies of the EU was that it 'appeared ineffective, constrained and at times... inept'.²³

Back on 1 January 2006, Moscow ended gas supplies to Ukraine, hitting countries from Romania to France. On 1 January 2009, it did the same again. Then, in 2014, the Kremlin annexed Crimea, which NATO thought had between 4000 and 13,000bcm of natural gas in the Black Sea.²⁴ But still the EU was taken by surprise by the crisis of Russian hydrocarbon supply that broke out in February 2022. EU energy policy, always lackadaisical, was exposed by underlying geographical, geological and geopolitical realities as worryingly feeble. A flood of recent proposals, policies and strategies from Brussels, whilst showing some awareness of the scale of the issue, has done little to suggest these

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fundamental realities have been understood.

2.5. Behind the curve on nuclear LNG and coal

In July 2022, after a February proposal by the Commission, the EU Parliament voted to allow projects in nuclear energy – and gas – to have Green investment status. This belated recognition of the low-carbon nature of nuclear power showed just how behind the curve the EU has been. Today France, Finland, the Netherlands, Hungary and the Czech Republic plan big new reactors, Poland is also interested, and Belgium will prolong the lives of its nuclear plants.²⁵ Indeed, Member State purchases of nuclear fuel and technology from Russia today stand at their highest in three years.²⁶

France, Hungary, the Czech Republic, Poland, Bulgaria, Slovakia and Finland are pro-nuclear; Germany, Denmark, Austria and Luxembourg are formally hostile to it. The European Commission is powerless in the face of this fissure. Indeed, according to its Net Zero Industry Act, published in March, nuclear is a net zero technology,²⁷ but not a 'strategic' one with which to reach the EU's climate goals – not like solar power, heat pumps, geothermal or 'sustainable biogas/biomethane technologies'.²⁸ In fact, a quarter of the EU's electricity output in 2021 was nuclear in origin; so when Commission President Ursula von der Leyen recently emphasised the EU's denial of strategic status, funding and sympathetic regulation to nuclear, she caused uproar – especially among pro-nuclear French officials.²⁹

“The EU's heavily qualified re-commitment to nuclear power cannot disguise the facts: it is not in charge.”

If nuclear is contentious, LNG is also troublesome. As early as 2016, the Commission insisted that LNG and gas storage would boost the EU's energy security.³⁰ More recently, it found that LNG 'diversifies EU gas supply sources, making countries more resourceful and resilient'.³¹ But Germany, having completed its first LNG terminal in record time, has proved a loose cannon. It wanted 12 new gas terminals; on climate grounds the EU only wanted it to have two. Berlin ignored Brussels on this point.³² That's part of the reason why, after a general round

of EU panic about LNG, Brussels could find that, by 2030, it, the UK, Norway and Turkey are saddled with more than 400bcm of terminal capacity, but demand for LNG only to the tune of 150bcm.³³

What about coal? Since December 2020, the EU has tried to help Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia and Ukraine move away from coal 'towards a carbon-neutral economy'.³⁴ However, the EU now finds coal production booming in the Czech Republic, while France, Italy, Spain, Greece, Hungary, Austria and the Netherlands have moved to prolong the life of old coal-fired power plants. Between 2021 and 2022, coal production in the EU rose more than seven per cent.³⁵ But nowhere has the revisionism been as extensive as in Germany, which now generates more than a third of its electricity through coal plants, and upped emissions from them by 15.8 megatons in 2022.³⁶

The EU's revived but heavily qualified commitment to nuclear power, its belated enthusiasm for LNG and its sheepish national reversions to coal cannot disguise the facts. It is not at all in control of events, but is, rather, tossed around by them. The EU needs to:

- Improve its medium- to long-term forecasting in energy, and its own, geopolitically informed versions of 'Plan B'.
- Factor into its forecasts the continued reliance of European freight and commuter transport on petrol and diesel.
- Remember that European power stations, industrial heat and homes all rely heavily on gas.
- Reassess, with EU citizens, the different technologies of energy, and which different countries and pipeline or LNG routes it should seek as sources of and transmission belts for fuels.

The last point is critical. Let's not forget that Qatar has threatened reprisals for the European Parliament corruption scandal known as Qatargate.³⁷ That should, by itself, alert us: EU complacency on Russian gas could very easily be duplicated with blindness about buying fossil fuels from other regimes not known for their commitment to democracy.

3. How EU policy decisions have made things worse

3.1. Failure in energy policy

The EU's failure to develop a successful energy policy was already a historical fact before Russia's invasion of Ukraine magnified the scale of that failure. When the EU abruptly 'discovered' its dependence on Russian oil and especially Russian gas, the dénouement was just the latest in a long line of grand but often failed visions for European energy and great slowness in achieving those visions.

"If the EU wants finally to arrive at a coherent and logical energy policy, it needs to come out of its bunker and debate."

In 2021 a special issue of *Energy Policy* titled 'When Energy Policy Fails: Impacts, Recovery & Managing Risk' was entirely devoted to the problem of energy policy failure. In the future, it was argued, such failure would mean 'any energy policy which does not deliver the 2030 energy and climate goals', as well as 'any energy policy which does not meet local, national, and international energy and climate goals across the activities of the energy lifecycle and where just outcomes are not delivered'. Indeed, in a remarkable piece of footwork, *Energy Policy* special issue editors Maciej Sokołowski and Raphael Heffron offered the following examples of policy failure:

*'One may list the inability to establish administration responsible for the energy sector (Llamosas et al., 2018), administration's lack of professionalism (Kytaiev et al., 2020), the failure to adopt international, European (Padgett, 1992) or national energy policies (Grossman, 2013; Llamosas et al., 2018) or a climate policy (Nye, 2014). Other issues include... incompetence in aligning industrial and renewable policies (Xu et al., 2020), the failure of dedicated energy legislation (Sokołowski, 2017, 2020a, 2021) ...'*³⁸

It is telling that here the only direct reference to the failings of European energy policy is a source dating from 1992. Apparently there have been no EU failures in energy in the 40

years since. Broadly, the EU has done, and now can do, no wrong. Measurable goals, quantitative targets, timelines and deadlines: in all of these, we are informed, the EU has 'extensive experience'.³⁹

Indeed. But this rosy assessment is wholly invalid. As Sweden's Anders Åslund, not someone known for scathing criticisms of the EU, has written:

*'Skyrocketing energy prices are a disaster for the European economy and its politicians. But given how feckless European energy policies have been, the economic pain they have caused should surprise no one.'*⁴⁰

Åslund is right about something else, too: energy connections between many Member States are weak or non-existent. For example, 'while Spain and Portugal have abundant LNG terminal capacity, there is very limited pipeline capacity to supply France, largely because the French have maintained a blinkered policy of keeping cheap Spanish gas out of the domestic market'.⁴¹

If the EU wants finally to arrive at a coherent and logical energy policy, it needs to come out of its bunker and debate the whole issue of energy policy failure with the public. Where has the Commission failed, and why? An honest accounting for past mistakes would make a refreshing change, and help avoid further mistakes in the future.

The following sections highlight where, specifically, the EU has gone wrong.

3.2. The politicisation of energy

Part of the issue is the way that energy policy has become diverted from the question of energy supply to include broader political objectives, most notably that of environmentalism. The result: the EU's line on energy is, in fact, a policy designed to avert climate change.

Article 194 of the Treaty on the Functioning of the European Union established the Energy Policy of the European Union in 2007. Buried away as Title XXI within Part 3, 'Union policies and internal actions', is a truly striking

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commitment: 'to promote energy efficiency and energy saving and the development of new and renewable forms of energy'.⁴²

The first issue here is: how many people in the EU know of this momentous Article, buried away as Title XXI within Part 3, Union policies and internal actions, of the Treaty on the Functioning of the European Union? For momentous it is. Indeed, it deserves a bit of historical context.

As MCC Brussels' executive director, Frank Furedi, has pointed out, after the 1970s, recurrent economic crises forced the various forerunners of today's EU to try to supplement their economic authority with a series of cultural initiatives.⁴³ The phenomenon is particularly clear in energy. A brief summary illustrates the key developments.⁴⁴

“Environmentalism has given the EU a fresh sense of mission. But that is not the same as addressing the weaknesses of EU energy policy.”

In 1972, the American computer modellers Donella Meadows and others wrote a report for elite movers and shakers belonging to the exclusive Club of Rome. The report set out the basic narrative for energy policy in the European Economic Community (EEC) and its subsequent incarnations. *The Limits to Growth: A Report to the Club of Rome's Project on the Predicament of Mankind* tied European institutions and European thinking to the idea that consumption, and in particular the consumption of a finite amount of fossil fuels, was a bad idea. The energy crisis of 1973-4, triggered by major price rises for oil made by suppliers in the Middle East, seemed to press the point. With the EEC unable to offer much of an answer to the stagflation of the early 1970s, the door slowly began to open for the anti-consumption ideas of the Club of Rome, of Ernst Schumacher (*Small is Beautiful*, 1973) and Ivan Illich (*Energy and Equity*, 1974).

Eventually, once the background foliage of Left and Right wilted with the end of the Cold War, more space emerged for Brussels to take charge. However, it interrogated not its own record in assuring the supply of energy, but rather the European public's supposedly

excessive consumption of energy. With indecision the hallmark of the EU as much as European national governments, playing up personal energy use absolved the European Commission from taking early, tough and costly decisions on energy supply. Though the end of the Cold War had robbed the EU of an important organising framework beyond the old one of economic legitimacy, Brussels still waited years before recruiting its sleepy policy on energy to a new sense of mission.

By 2007 and Article 194, however, the world stood differently. As fears about climate change began to mount, the EU did not just commit to internal markets, the environment, *Communautaire* solidarity and security of supply. In item (c), Article 194 also upheld a new 'Holy Trinity' of energy Efficiency, energy Saving, and Renewable energy – henceforth, ESR. Since 2007, the EU has expanded its jurisdiction over energy. But as disputes over Von der Leyen's anti-nuclear policy confirm, the nation state is not wished away quite as easily as the Brussels Commission might like.

Environmentalism has given the EU a fresh sense of mission. But that is not the same as addressing the weaknesses of EU energy policy. In fact, the likelihood is that environmentalism only deepened these. As one summary of EU energy experts' notes, not only do 'Member States pursue often conflicting policies toward nuclear, gas, or electricity generation',⁴⁵ but emissions-reduction schemes made a turn toward coal and other fossil energy sources more expensive, resulting in 'social and economic backlash for European consumers and producers'.⁴⁶ The summary is bleak: 'the energy crisis is indeed self-inflicted and points to what the EU still lacks', namely 'a strategic analytical and planning capacity'.⁴⁷

3.3. Hobbling EU energy infrastructure and supply

The intense politicisation of the EU's energy policy has led to neglect of supply, and of transmission. The EU's preference for environmentalism and for its own ways of mitigating climate change has completely overshadowed the development of a modern, reliable, plentiful energy system. Brussels has squandered chances to invest in cross-border projects and transmission. It has also consciously restricted supply by demonising various sources of it. Let's take these two errors in turn.

How EU policy decisions have made things worse

3.3.1 Transmission and cross border projects

We turn first to transmission. More than 15 per cent of electricity in the EU is traded across borders. In 2026 the Celtic and the EuroAsia interconnectors, two subsea links, will connect all Member States to the European electricity grid. Yet progress is slow. If all such Projects of Common Interest (PCIs) are commissioned by 2030, that may lower the average wholesale price of electricity by just 2.5 per cent.⁴⁸

Referring to Trans-European Networks for Energy (TEN-E), the Commission says that the EU's cross-border energy system has developed significantly since the 1990s, and especially since 2013. The apparatus is, Brussels boasts, 'more resilient and flexible than any system across the globe'. In 2009, after all, eight Member States relied on a single source of gas, often Russia; now, because of cross-border gas PCIs in energy infrastructure, no Member State endures that indignity. Similarly, adds the Commission, the completion of today's gas PCIs will see all Member States have direct or indirect access to the world market for LNG.

"The more the EU invests in renewable sources of electricity, the more back-up it will need in terms of gas."

But back in December 2020, the Commission proposed to bar oil and natural gas infrastructure from remaining the subject of PCIs. Later, in November 2021, it conceded that, to ensure security of supply for all Member States, 20 cross-border gas projects could go forward, compared with 32 in the previous list of PCIs. However, once these 20 were completed, there would no longer be a need to support gas projects with PCI status. To reinforce that cross-border collaboration was finished for fossil fuels, the Commission concluded:

'No new gas infrastructure projects are supported by today's proposal. This underlines the robustness and resilience of the existing EU gas grid, as well as the EU's resolve to phase out support for fossil fuel infrastructure. The low number of gas projects on the list is also the result of the

*strengthened sustainability assessment applied to candidate PCIs in gas.'*⁴⁹

The EU's 11 'Priority Corridors' concern electricity networks on land and offshore; the only gas network planned now is 'the emergence of an integrated hydrogen backbone' – mentioned three times.⁵⁰

The EU's move to discontinue cross-border projects in fossil fuels shows just how lazy its thinking has become. Just when the Kremlin's tactics with oil and gas have highlighted the need for more, new, better, more capacious, longer and safer oil and gas networks, the Brussels Commission rules them out of bounds, preferring... a flirtation with hydrogen.

3.3.2 Energy supply and energy sources

Always obsessed with climate change to the exclusion of everything else, the EU portrays gas as a 'transition' fuel, whose lifetime will be limited.⁵¹ But gas cannot be written off like this. To ask non-EU investors to invest in gas networks while telling them that the EU's interest will be of a limited duration will likely invite a dusty answer. As the Canadian energy expert Vaclav Smil has put it:

*'Fossil fuels now supply about 83 per cent of the world's commercial energy, compared to 86 per cent in the year 2000. Wind and solar now provide less than six per cent of the world's primary energy, still less than hydroelectricity.... What are the chances that the world will go from 83 per cent to zero during the next two decades?'*⁵²

The more the EU invests in renewable sources of electricity, the more back-up it will need in terms of gas. Nuclear power cannot be adjusted to the vagaries of intermittent electricity generation the way gas can. Gas will also remain vital to high-temperature industrial processes for a long time. Nor are heat pumps about to sweep aside gas-fired central heating in a hurry. Berlin has a large-scale and long running scheme through which German households can get loans to help with opting for renewable energy. But though applications for such loans rose from 76,000 in 2019 to 280,000 in 2020, those still tiny totals show that Germany's 42m households won't be done installing heat pumps for decades. And for the EU-27, the wait will be interminable.

Tables and illustrations

2011	2012	2013	2014	2016	2017	2018	2019	2020	2021
63.87	63.17	62.69	60.48	61.26	61.95	62.55	62.77	61.77	60.11

Table 1: Primary energy consumption in the EU, 2011-2021, exajoules.¹⁵

	EU Member States	US
Energy efficiency	573.6	1159.1
Fossil fuels	92.8	397.2
Renewable energy	412.4	475.2
Nuclear	186.0	842.7
TOTAL (incl hydrogen, energy storage, etc)	2110.4	5792.3

Table 2: Spending on research, design and development in different kinds of energy, EU Member States and the US, €m, 2021 (EU) and 2015 (US).¹⁰⁸

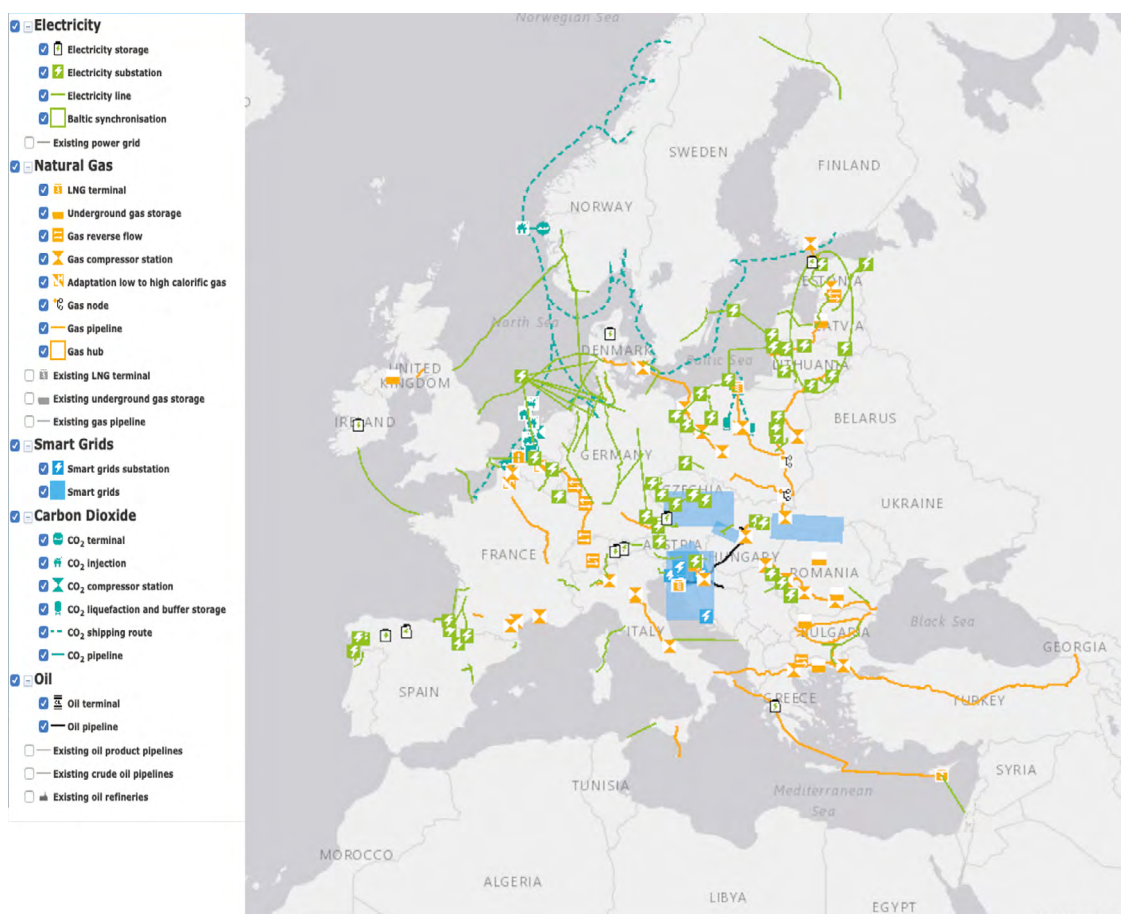


Figure 1. How the EU maps its energy system.⁶

How EU policy decisions have made things worse

As we have seen, fracking faces prohibitions in the EU. As we will see, coal, though enjoying a revival, is a shadow of its former self. The net result is that the EU doesn't have enough energy to go round.

3.4. Extending the irreformable: the Emissions Trading System

If neglect of supply and infrastructure is one inevitable consequence of the politicisation of policy, taxing emissions through the EU's Emissions Trading System (ETS) is another. The ETS, the European Parliament says, is 'at the core of European climate policy and key to achieving the objective of EU climate-neutrality'. By putting a price on GHGs, we're told, the ETS has triggered 'significant' cuts in emissions.⁵³ With border taxes on carbon beginning to hit imports of steel, cement, aluminium, fertilisers, electricity, and hydrogen in 2026 through the Carbon Border Adjustment Mechanism, it's evident that the EU prefers endless fiddling with carbon regulation to doing something about energy shortages. For example: the inclusion of fuel for road transport and buildings in a separate, new ETS II, to be launched in 2027, will mean that still more sectors of the EU's economy will be hit by an inflationary carbon tax.⁵⁴ For the first time, shipping will also be subject to the Carbon Inquisition, while aviation will also meet a tougher emissions regime.⁵⁵

"Not for nothing does president Zelenskyy proclaim that diesel generators have become 'as important as armour'"

Today the European Public Prosecutor's Office is going after Bulgaria for false reporting on power plant emissions – since 2017. Yet it seems to escape the EU's institutional memory that the ETS has always been plagued by false hopes, dashed expectations and outright fraud. In 2013 Interpol was called in. In 2017 Le Monde recounted how the EU had been defrauded of €6bn through the ETS.⁵⁶

The ETS now covers almost half of EU emissions. But recent Commission proposals to end the giving away of credits cannot disguise the fact that 'the actual carbon price being paid by firms under the scheme is just €6.58 per tonne – far short of the \$40-200 per tonne estimated by advocates to be the necessary effective price'.⁵⁷

That the EU should put an obscure trading system, with a questionable history, at the core of its climate policy is one thing. But ETS revenues are also meant, in part, to fund innovation in energy. Such funding is of course very much needed – but the ETS is no way to go about doing this.

3.5. A Black Hole for memory: the ECSC and Euratom

EU energy policy in the future would benefit greatly from knowledge about EU energy policy in the past. However, the EU suffers from historical amnesia about energy. One example: it too easily forgets how much natural resources, beginning with coal, were always essential to military prowess.

Whatever the EU might like, in the 20th and 21st centuries energy has proved to be of great significance to the survival of nation states. Not for nothing have Russian generals launched relentless onslaughts on Ukraine's energy infrastructure, or does Ukrainian president Volodymyr Zelenskyy proclaim that diesel generators have become 'as important as armour' to protect Ukraine's population.⁵⁸ Wars made by European nation states in the 20th century could sometimes be motivated, in part, by the quest for oil; but the military use of oil for traction on land, sea and in the air showed its historical relevance to the continued life of nation states.

In the First World War, the shift in British naval propulsion from using coal to using oil proved decisive. In the Second World War, the Allies sacrificed much in big air raids on German hydroelectric facilities and Romanian oilfields. They then concluded war with Japan by twice subjecting it to the use of atomic energy as a weapon.

Yet in the Black Hole of EU energy policy, there could never be any room for these, the geopolitical and strategic realities of energy, the reality of energy's indissoluble links with the nation state. So jogging the EU's memory is a very topical exercise. Two examples will suffice.

3.5.1 The ECSC and the decline of Europe's mines

In the summer of 2002, the European Coal and Steel Community (ECSC) Treaty expired, 50 years after it had first come into force. In the Cold War, the technocratic statesman Robert Schumann managed to get participants

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in the ECSC – Belgium, France, Germany, Italy, Luxembourg and the Netherlands – to lift restrictions on imports and exports of coal and steel, ‘the key drivers’, the Commission rightly noted in 2002, ‘of national war machines’. The ECSC’s High Authority, Council of Ministers, Assembly and Court of Justice went on to pioneer the structures and processes that informed the European Community after its creation in 1957.⁵⁹

While America pressed rearmament on Western Europe, it laid the foundation for the ECSC and made it politically possible.⁶⁰ But if the ECSC’s expansion of steel output is still quoted as testimony to its success, a Black Hole for memory surrounds coal. At first, the ECSC was quite successful in stimulating capital expenditure in the mines, with nearly \$0.5bn being invested in 1957. Thereafter, though, ECSC coal suffered a glut, with the result that output fell from 248m to 82m tonnes between 1953 and 2001. Meanwhile miners’ jobs collapsed, from 955,000 to 88,000.⁶¹

Had coal had its day? Perhaps. But the evidence suggests that the ECSC merely helped manage the decline of a key energy source – one that Member States still find themselves needing today.

3.5.2 Euratom: feeble in youth, feeble today

Even with Washington, the Cold War and the post-war boom behind it, the first pan-European exercise in energy policy left much to be desired. It was a similar story with Euratom, or the European Atomic Energy Community (EAEC). Though the Suez crisis of 1956 revealed Europe’s precarious dependence on Middle Eastern oil, negotiations preceding the establishment of Euratom, seen as an alternative source of energy, proved long and difficult: they ‘accurately illustrated the extent to which national interests on this matter differed’.⁶² Then, not very long after the entry into force of the Euratom Treaty in 1958, it became increasingly clear that Euratom was a failure. Indeed, many of the Treaty’s provisions ‘came to have little or no practical relevance, including what in the negotiations had been considered the most central ones’.⁶³

After ructions between the EEC and France over whether to adopt American nuclear technology, Euratom went into a crisis that lasted into the 1970s. Between 2006 and

2021, Euratom proved unable to prevent a drop in nuclear electricity supply of 20 per cent, largely caused by Germany’s decision to quit the field.⁶⁴ Nor, in 2022, was Euratom able to help France when nearly half the country’s ageing nuclear fleet had to be shut down owing to corrosion, postponed maintenance and summer heat waves.

“In the Black Hole of EU energy policy, there is never any room for the geopolitical realities of energy.”

The history of the Coal and Steel Community and of the Atomic Energy Community is, today, rather conveniently forgotten. Yet the record is clear: the two opening gambits of Europe-wide energy policy ended up going nowhere. Nobody can claim, for instance, that Brussels did great work easing the decline of the coal industry, and of retraining miners around new, good jobs in high-tech branches of energy production or elsewhere. Today, too, it is the same tale. For all the talk of Green jobs, we do not hear much about the excellent training, skill and pay that ought to go with them. We can also be sure that Ursula von der Leyen will not designate jobs in the nuclear industry as Green.

The maps and the medium-to-long-term preparation we have called for, and the unabated economic and popular demand for energy that we predict, together mean that the Commission must change course. If it does not, we can expect more of the failures of the past – in an era rather less auspicious for cooperation between European nation states than the 1950s and 1960s.

The phasing out of fossil fuels ought to mean a revived role for nuclear power. But Germany and Austria are adamantly against that, just as much as landlocked states such as the Czech Republic will always prefer nuclear to offshore wind.

No single bullet will solve Europe’s energy problems. But the retirement of gas from the Commission’s worldview will prove a much more damaging exercise than the ECSC and the EAEC ever were.

4. The Holy Trinity of ESR

We noted that, in 2007, the EU upheld a new 'Holy Trinity' of energy Efficiency, energy Saving, and Renewable energy (ESR). Below, we review the performance of the European Commission in each of these three domains.

4.1. E is for yet more Efficiency

If there is one path away from carbon which the European Commission really likes, it is that of energy efficiency – beginning with buildings, especially public buildings, but also including transport and industry. The EU did seek, by 2030, to make efficiency savings on primary and final energy consumption of 32.5 per cent compared with 2007 projections; but it has since raised that target to 36-39 per cent, and has made adherence to it legally binding.⁶⁵

This crusading zeal isn't justified. Retrofitting insulation to buildings is a labour-intensive, low-tech and costly business. Meanwhile, improvements in the energy efficiency of internal combustion engines (ICE) are only gradual, while prospects for electric vehicles (EVs) have recently cooled somewhat, as the cost of electricity has risen.

No wonder, therefore, that the EU's 2022 report on the achievement of the 2020 energy efficiency targets was not sanguine about the cut in energy consumption that the EU managed to register in 2020, which were 'highly influenced' by Covid lockdowns. It concluded:

*'Far more efforts are needed if the EU aims to achieve a structural reduction in energy consumption... The information gaps in Article 5 of the EED [Energy Efficiency Directive 2012/27/EU] as well as the different approaches in reporting between Member States, do not allow to understand [sic] the level of target achievement at EU level.'*⁶⁶

The goal of a structural cut in energy consumption is as elusive as ever. A decade on from the Efficiency Directive of 2012, it appears difficult for the EU even to get information on and compare improvements in energy efficiency.

To illustrate the snags here, consider the energy efficiency of residential buildings, and

take the example of Germany. The German government is often considered a leader in improving efficiency.⁶⁷ But, in fact, while applications for home improvements almost doubled between 2019 and 2020, they rose from 326,000 to just 600,000.⁶⁸

“What is needed is a new programme of housing - not mending the draughty accommodation of the past.”

That might seem like a significant increase; but German households number 41.6m. Nearly 60 per cent of German homes were built on or before 1970, compared with a figure across the EU of 49 per cent.⁶⁹ This means that their construction preceded the adoption of thermal standards in the wake of the energy crisis of 1973-4: in winter, these homes are cold. Even if the current take-up rate were held to unwaveringly, the job of retrofitting insulation to German homes could last, perhaps, a third of a century.

This kind of slowness with efficiency programmes is entirely typical. It is hard to wreak continual improvements in energy efficiency, for it has limits. It takes a definite amount of energy to move an object, say, or to heat it up. Entropy and the second law of thermodynamics set further limits on how efficiently energy can be converted from one form into another. Once efficiencies have reached the maximum allowed by the laws of physics, the only option left is to generate more energy.

The proper policy on efficiency and residential housing is to build new, energy-efficient homes, preferably from factories where quality control can be made the norm. The European Commission does not make the collection of data on homelessness a priority, but it is estimated that in the past 10 years, homelessness in the EU has risen by 70 per cent, with at least 700,000 people homeless on any given night.⁷⁰ What is needed is a crash programme of housing them – and Ukrainian refugees – in new, well-insulated homes. Also needed are bigger programmes to rehouse the tens of millions of other EU citizens who are currently in sub-standard

The Holy Trinity of ESR

accommodation. These actions would be better than trying to mend the draughtier accommodations of the past.

4.2. S is for Saving: the Not-So-New Frugality

Frans Timmermans is European Commissioner for Climate Action, Executive Vice President of the European Commission for the European Green Deal, and First Vice-President of the European Commission. He has repeated that 'saving energy, not using energy, is the cheapest energy obviously'.⁷¹



Point man for the European Green Deal: Frans Timmermans.

In fact, the idea that energy saved is superior to energy generated is one originated by Amory Lovins and his Rocky Mountain Institute, Colorado, back in 1989.⁷² Indeed the 'Negawatt Revolution' promoted by Lovins is an idea that *The Economist* shamelessly endorsed when Russian soldiers secured Crimea early in 2014.⁷³ Yet all these years later, the European Commission still has an *idée fixe* about saving energy.

Take the EU-funded €3.2m FULFILL project, involving a consortium of research institutes, academia, thinktanks and NGOs. In the usual casual Brussels prose, FULFILL will 'explore the contribution of lifestyle changes and citizen engagement in decarbonising Europe' and, at individual, household, community and municipal levels, will 'determine routine behaviours that can lower energy demand and emissions and at the same time contribute to well-being'. In a nod to Lovins, one of the

bigger grants in the FULFILL programme – more than €500,000 – has gone to ASS NEGAWATT COMPAGNIE DES NEGAWATTS, based in Alixan, in the Drôme, Auvergne-Rhône-Alpes, France.⁷⁴

Saving energy is the first of the three pillars of the EU's REPowerEU plan. Published in May 2022, the plan aims rapidly to reduce dependence on Russian fossil fuels, 'fast forward the Green transition' toward renewables, and increase what is termed 'the resilience of the EU-wide energy system'.⁷⁵ Alongside switching from fossil fuels to renewables, then, FULFILL favours correcting how people, businesses and other bodies conduct themselves with energy – their habits, their lifestyles. As REPowerEU puts it:

*'Every citizen, business and organisation can save energy. Small behavioural changes, if we all commit to them, can make a significant difference.... including by: Reducing heating temperatures or using less air-conditioning; Using household appliances more efficiently; Driving more economically; Shifting to more public transport and active mobility; Switching off the lights.'*⁷⁶

This is the Not-So-New Frugality. In this scheme, every European must play an upright and responsible role. Indeed, the behavioural changes demanded will not be small, as claimed: in a review of the scheme, the IEA has concluded that they must be 'large-scale'.⁷⁷

In its condescending appeals to the European public, the EU only displays its impotence in the face of major energy events. A test of the EU's willingness to take seriously the supply side of energy will be if, and how soon, it stops scolding 'consumers', and stops giving them infantile advice.

4.3. R is for yet more Renewable electricity

For the Commission, renewables are 'the cheapest and cleanest energy available'. They also reduce the need for energy imports. The Commission proposes to increase the EU's 2030 target for renewables from the current 40 per cent of electricity supply to 45 per cent. The REPowerEU plan would bring total renewable capacity to 1,236GW by 2030, of which almost 600GW is meant to be solar. By 2027, it is hoped, additional capacities will

The Holy Trinity of ESR

displace the consumption of nine bcm of gas annually.⁷⁸

Yet this is peanuts. In 2021, for example, the European Union consumed more than 400bcm of gas.⁷⁹

With renewables, the Commission will once again see its utopian premises run up against reality. It appears oblivious to the need for gas as a back-up for wind and solar power. It shrugs off all responsibility for the extra management, IT, generation and transmission systems that will come with more exposure to renewables. As a 2014 report dryly noted, 'there are also potentially higher electricity system costs when the share of supply-driven renewable sources (like wind and solar PV) increases'.⁸⁰

In other words: The more the EU chains Europe to reliance on wind and solar, the more Europe will need gas back-up – back-up that will not come for free. Gas is not going away anytime soon. The EU needs to prepare for this. Of all the energy scenarios that might be toyed with, the persistent need for gas is by far the most likely.

5. No 'clean' energy, no Green Deal

In no two fields of EU energy policy are the emperor's new clothes more transparent than in the European Commission's insouciance toward 'clean' technologies, and in its relentlessly chanted mantra of a Green Deal and Green jobs. Moving forward to a coherent policy on European energy must mean talking the truth about both these concepts.

5.1. What do we mean by 'clean' energy?

In 2022, a week after EU lawmakers decided to ban conventional ICE cars from 2035, Thierry Breton, commissioner for the internal market, gave this warning about EVs:

'We will need 15 times more lithium by 2030, four times more cobalt, four times more graphite, three times more nickel... So we will have an enormous consumption of raw materials, and we need to study all this.'

In fact, Breton went further in his criticisms of EVs:

*'There are additional emissions, which are very important – those from tires and brakes, which emit particles that are very damaging to health. So even after 2035, when we will no longer sell combustion-engine cars, there will be emissions... Electric vehicles are around 40 percent heavier than traditional ones, because of the batteries... So they emit much more particles from brakes and tires than combustion cars.'*⁸¹

Breton worries not just about ICE cars, but EVs too. Yet still the EU upholds 'clean vehicles'.⁸²

There is cleanliness and cleanliness, of course. In March this year, Germany managed to get the Commission to bend the rules in its car industry's favour, and allow ICE cars to be sold after 2035 provided they run on 'e-fuels', which are meant to be 'clean'.⁸³ But Bulgaria has not been so lucky in the case of vehicles operated by its public sector. The Commission has referred Bulgaria to the Court of Justice of the European Union for failing to adopt clean vehicle procurement targets for 2021-25.⁸⁴

5.1.1 Clean will still mean Chinese

We should stop using the loaded adjective 'clean', and start using the phrase 'mostly supplied by China'. In the March 2023 Critical Raw Materials (CRMs) Act, and since, Breton has laid out plans to diversify EU sources of natural elements that are vital to wind turbines, solar power and batteries for EVs. The idea is to reduce dependence on China, advance 'breakthrough technologies' in CRMs, and, by 2030, ensure that 10 per cent of CRMs annually consumed in the EU are extracted there (with the current figure only three per cent), 40 per cent of CRM processing is done there, and 15 per cent of recycling, too. No single outside country should be allowed to take more than 65 per cent of the EU's consumption of any strategic material at any stage of processing.⁸⁵

"When the EU boasts of its commitment to clean technologies – are they 'clean' for Congolese children who dig for cobalt with their bare hands?"

It's obvious that the scarcity of Critical Raw Materials underneath EU soil is not the fault of Brussels. Yet the CRM Act is extraordinary not just in its tardiness and meek approach, but in the contortions that it demands of Member States to get 'clean' in electricity supply and cars, and at the same time lower the influence of China.

The Commission has maintained a list of CRMs since 2011. The Green Deal was presented in 2019. Yet only now has it begun to wake up to China's dominance in CRMs – a dominance it will find hard to shrug off.

In turbines, China has yet to make sales progress in the EU. However, the Chinese turbine manufacturer Mingyang will soon bring a 16MW offshore machine to market, the world's largest. 'China has the most efficient, concentrated, and low-cost supply chain for turbine [manufacturers] in the world, and many Western companies source parts from Chinese suppliers', says one expert in energy finance.⁸⁶

No 'clean' energy, no Green Deal

In solar power, China has invested more than \$50bn in new PV supply capacity – 10 times more than Europe. China's share in the world's production of PV modules and polysilicon is nearly 80 per cent; in cells, and especially wafers, it is higher still.⁸⁷

In batteries for EVs, it was reported in February 2022 that China's Contemporary Amperex Technology Company Limited (CATL) was the single largest supplier of automotive lithium-ion units, with a global market share of 32.6 per cent in 2021; BYD, China's second-largest supplier, was the fourth largest worldwide, with an 8.8 per cent market share.⁸⁸ However, by the time the data was in for the full year of 2022, BYD had drawn abreast of South Korea's LG, sharing second place with 13.6 per cent.⁸⁹

"However urgent the climate crisis is, the EU will dawdle. Well past 2030, in fact, Beijing will be calling the shots in CRMs."

In the three technologies we have described, China is the major global force. Even in plain lithium, in which it only has 14 per cent of global production, it has spent billions of dollars buying up mines in Latin America.⁹⁰ So: given all this, what chance has the EU of ensuring that 'clean' doesn't mean Chinese? As the legal eagles Clifford Chance acutely note, of the CRM Act:

*'At first glance, the proposal appears ambitious in terms of objectives, but the means to achieve them may be inadequate, given the non-binding nature of the key targets and questions remaining around how to speed up some of the proposed measures (such as permitting) effectively. There is also no new funding being made available.'*⁹¹

Here, 'permitting' will now mean getting the go-ahead for extraction within 24 months, and for processing or recycling, 12 months. However, as the lawyers say, 'the decision to proceed with a project may in part be determined by the national permitting process'. Once again, each Member State will have the last word, this time on whether it should be home to mining and industrial processes that somehow will have none of the dirtiness of fossil fuels. Member States are also likely to water down the provisions of the Act, and will have to get it passed in early 2024 if it is not to be delayed till sometime

after a new European Parliament is elected next spring.

However urgent the climate crisis is, the EU will dawdle. Its own proposals would still allow China to account for 35 per cent of EU CRMs. Well past 2030, in fact, Beijing will be calling the shots in CRMs. Right now, EU dependence on China for raw materials remains 'even higher' than dependence on fossil fuels from the Middle East Gulf ever was.⁹² But for Brussels, these problems can be waved away, so great is its desire to rid itself of carbon.

5.1.2 Cobalt means Chinese

China is the world's leading producer of refined cobalt, most of it being made from partially refined cobalt imported from the Democratic Republic of Congo (DRC). China is also the world's leading consumer of cobalt.

With cobalt, an essential ingredient of EV batteries and wind turbine magnets, the DRC is responsible for more than 70 per cent of world supplies. But in the DRC, 'in lieu of investment from risk-averse, Western, publicly traded multi-national mining firms', it is Chinese, Kazakh and Dubai-based companies which own the cobalt mines, with China in pole position.⁹³ How is the cobalt mined there? For one Washington think tank, there is no mincing of words. Small-scale mining in the DRC, the Wilson Center writes, 'involves people of all ages, including children, obligated to work under harsh conditions. Of the 255,000 Congolese mining for cobalt, 40,000 are children, some as young as six years. Much of the work is informal small-scale mining in which laborers earn less than \$2 per day while using their own tools, primarily their hands.'⁹⁴

So when the EU boasts of its commitment to clean technologies, we are bound to ask – are they 'clean' for Congolese children who dig for cobalt with their bare hands?

This is a general problem: it is hard to know how much the materials used in renewable technologies are today worked up in Xinjiang, and in what kind of operating conditions. Similarly, little information appears available on the burning of fossil-fuels that takes place when vessels ferry wind turbines out to sea. Uncertainty also surrounds exactly how wind turbines should be disposed of at the end of their lives. But what is clear is that the Commission needs to drop the self-serving babble about 'clean'.

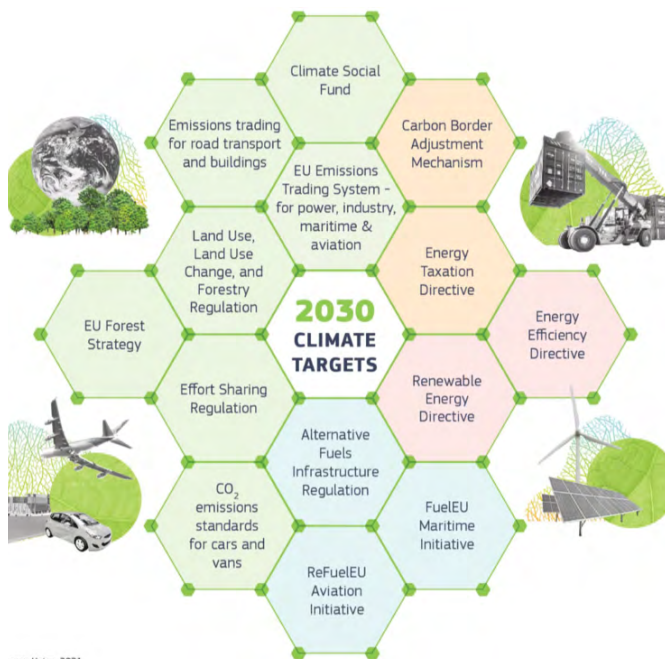
No 'clean' energy, no Green Deal

5.2. No Green Deal for jobs

First presented by the Commission in 2019, the EU's European Green Deal (EGD) means 'addressing inequalities through the Green transition'. For the Commission, that transition could create about one million jobs by 2030 and two million by 2050 – 'particularly middle-skilled, middle-paying jobs, in construction and manufacturing'.⁹⁵

This is all very well. But unemployment in the EU stands at 13m; once, in April 2013, it reached 24.3m. Worse, we are assured that the EGD will deliver 160,000 additional Green jobs in construction by 2030, at the same time as 35m buildings are renovated across the EU.⁹⁶

These figures seem both highly fluid and highly suspect. As for 35m buildings being renovated by 2030, we saw earlier that the German rate of home insulation has hit just 600,000 a year. Clearly Brussels believes that, for each of nine years and by taking on just 160,000 extra workers, it can retrofit nearly four million EU homes a year. That would be going it some.



European Union, 2021

Figure 2. Honeycomb complexity: the 14 component parts of the European Green Deal.

Ironically enough, the first 'Green Deal' was pioneered in the UK, now no longer part of the EU. 'As one of the cornerstones of the UK Energy Bill 2010–2012', two authorities have it, the UK's Green Deal aimed to 'provide rules and structure to facilitate mass thermal

renovation through financing renovation projects in rental and owner-occupied homes.'⁹⁷

But Britain's Green Deal was not successful. The UK still has the draughtiest homes in Europe.⁹⁸

In its urge to lower carbon emissions, provide energy and address inequality through the creation of new Green jobs, the EGD has a familiar Black Hole aspect to it. It lacks a unifying theme. It is also – perhaps deliberately – hard to remember. Figure 2 shows how the EU represents it.⁹⁹

Aside from sheer complexity, the drive toward the Green Deal is beset by contradictions. For example, if the purpose of energy policy is to create jobs, why then, since 1985, has the EU played a leading role in ITER, in southern France, whose task is to take forward nuclear fusion – a capital-intensive enterprise which, once it succeeds, will employ very few people?

The Commission needs to remember that it is not the task of the energy sector to create jobs, but rather to produce affordable and reliable energy.

6. Disunited and uncompetitive

The EU can agree on some things: nothing is ever the Commission's fault, and EU citizens must save energy. For the rest, though, the centrifugal forces unleashed around EU energy policy are real enough, and are not just the product of the Kremlin's invasion of Ukraine. They have been building up for a long time.

6.1. Disunited over energy plans – and, in future, over state aid

More than three decades on from all the fanfare that accompanied the Single European Market in 1992, Brussels has still not managed to unify energy markets in the EU. Energy Union was meant to be achieved by 2015, with one big gas and electricity grid and one big energy market stretching across the EU. That hasn't happened.

What does the Energy Union now consist of? As early as 2020, before the surge in energy prices that started the following year, about 35m EU citizens – eight per cent of the EU population – were unable to keep their homes adequately warm.

We have seen that Brussels could only stand by when different Member States responded to the crisis with Russian gas by each going their own way with alternative sources. But Germany's decision to break ranks and pay out a €200bn state subsidy for energy going to businesses and households went down badly with other EU Member States¹⁰⁰. And today? We have seen how Member States disagree on nuclear energy, and on the relevance of offshore wind power. But they differ, too, on oil and gas pipelines, while Germany's LNG terminals have rankled. As for electricity interconnectors and another old friend, smart grids, these will not only cost billions of Euros, but also sow division as much as they do connection.

Back in 2020 the IEA wrote that EU Member States' National Energy and Climate Plans were 'at the heart of today's energy sector governance'.¹⁰¹ But late in 2022, in an evasive footnote, the Commission itself let slip that it expected these Plans to be drafted only by June 2023. Amid a welter of acronyms and buzzwords, it continued with a call for greater competitiveness in technologies.¹⁰²

However, lack of competitiveness is not just something that afflicts 'clean' energy in the EU, but all kinds of energy. What's more, setting out June 2023 and June 2024 for revamped climate plans looks like a very leisurely schedule for responding to what the European Parliament declared, back in 2019, as a climate emergency.

"Everything about the EU's history tells us that unified thinking and action by EU Member States around energy is the exception, not the rule."

This year, the Commission has further compounded disunity among its ranks. In a protectionist response to President Joe Biden's protectionist Inflation Reduction Act (IRA), it has come up with what it calls the Green Deal Industrial Plan.¹⁰³ Among other measures, this proposes to enhance the competitiveness of Europe's 'net-zero industry' by allowing Member States to grant 'necessary aid to fast-track the Green transition' – through what the Commission calls a Temporary Crisis and Transition Framework.¹⁰⁴ What this means is a relaxation of EU rules barring Member States from state aid, including tax benefits, so that they can help companies go Green. But this will make things fly apart. As the Munich banking giant Allianz quickly commented:

*'Although this relaxation is (still) temporary, it is a slippery slope: National support measures might be easier to implement, but they threaten to undermine the Single Market, the EU's greatest success, and to widen the gulf between richer and poorer EU members. At worst, they could open the Pandora's box of a subsidy race to the bottom – between the EU and the US and within the EU.'*¹⁰⁵

The Commission's commitment to Net Zero is so great, it is now ready to exacerbate fragmentation along national lines.

Everything about the EU's history tells us that unified thinking and action by EU Member States around energy is the exception, not the rule. Of course, no nation is an island, and common initiatives can make sense. But the Commission needs to stop pretending that

Disunited and uncompetitive

it can harmonise national energy plans and avoid members engaging in recriminations over state aid.

So long as renewables sources of energy dominate, parochialism will triumph.

6.2. Uncompetitive in research and innovation

Adding to disunity in the EU, levels of competitiveness in the energy sector also vary widely between Member States. Yet that is not the only problem facing the EU: as a whole, it has a crisis of energy innovation. In its seventh report on the state of the energy union, the Commission confessed:

*'About half of the greenhouse gas emissions reductions expected by 2050 require technologies which are not yet ready for the market ... the Heat Pumps sector will have to accelerate ... Despite initiatives which are underway, the lack of EU domestic raw materials and advanced materials productions represent a challenge for the EU competitiveness [on batteries].'*¹⁰⁶

For an organisation in a hurry with Net Zero, the faith in technologies which are not yet ready was remarkable. A little later, too, the Commission was forced to admit that 'Although many funding dynamics are positive, structural barriers and societal challenges are still holding back EU-based climate tech scale-ups by comparison with other major economies'.¹⁰⁷

If we look at public spending on research, design and development in energy, the figures for the EU Member States in aggregate and for the US are telling, even if those for the US are out of date. Table 2 (p.13) shows a brief overview of the expenditures on four broad kinds of energy research.¹⁰⁸

More detailed figures show that EU governments' very modest research on fossil fuels is nearly entirely devoted to carbon capture and storage, while spending on nuclear energy is divided between nuclear fission (€75.5m) and nuclear fusion (€110.5m). But there are two more basic traits. First, governments in the EU today spend, in aggregate, a whole lot less on R&D than the US did some years back. Second, they would rather research energy efficiency than renewables – let alone other, less respectable sources of energy.

That won't do. As a priority, the EU needs to open a public discussion about Member States' expenditures on energy R&D – and its own role in that endeavour. Broadly, Europe should stop its expensive tinkering with efficiency research, and stop giving renewables privileged treatment. Instead, it should spend a lot more money trying to find cost-effective means of adopting carbon capture and storage, as well as trying to improve the productivity of every aspect of fossil fuels – fracking included. What do we know about prospects for fracking in the geological conditions, and the landscape of habitation, of Europe? What might we do about losses of methane in the process of shale gas extraction? The EU knows nothing about these things, for it does not research them by conducting experiments. It has set its face against even the possibility of using the gas and oil beneath it.

7. Conclusion

The outstanding feature of EU energy policy is the trouble that the lay EU citizen must go through if he or she is to understand it. The policy is opaque, and it suits the European Commission to keep it that way. At every turn since the Ukraine crisis broke out, the Commission has been exposed as unready and impotent. The European Green Deal, the energy 'transition' – these honeyed, shimmering concepts have had to make way for the true grit of security of supply and affordability.

The gloss that is often put on the new situation ushered in by Vladimir Putin is that renewables themselves form the best way to guarantee energy security, and that they are cheap too. Yet renewables, like the batteries in EVs, pose their own supply-chain dilemmas. As for their cheapness, it is idle to try to isolate a single source of energy when what Europe is dealing with is a complete energy system. Renewable electricity will rely on back-up from gas-fired power stations. It is not as cheap as its advocates make out; and when the wind doesn't blow and the sun doesn't shine, all its reputed cheapness will not keep Europe's homes, offices and factories supplied with heat and electric power.

The unanimity with which the European Commission pursues its climate goals cannot mask the severe splintering over energy that has taken place since February 2022. Always buffeted by events, the Commission can also not hide how deep disunity on energy goes.

So, it's a time for honesty. The Commission should take a long, cool look at its historical record in energy and admit its failures. It should end its opacity over energy and stop trying to downplay disputes between Member States. If it can bring itself to, it should publicly question all its starting points: the ETS charade; the chase after energy efficiency; saving energy, not producing it; the unimpeachable brilliance of renewables, and the unblemished nature of 'clean'.

The other imperative for the Commission is to stop trying to do everything on energy. There are quite simply too many programmes, too many goals, too many things for it to handle through multitasking. For the Commission, energy has become climate; in turn, climate action is held to mean action on behalf of

vulnerable groups, and against inequalities.¹⁰⁹ Energy research, development, innovation, productivity – all these take a back seat.

Climate change is a real problem. But it is no good the EU trying to return to the Old Normal, in which fears about climate completely occluded the need to keep the lights on. It is a harsh new world that we have entered, and sooner or later a harsh judgment will be made about the Commission's energy policy. In a spirit of openness, and in the knowledge that demand for energy is not going to go away, it should steer clear of climate alarmism and stick to fundamentals.

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