

Analysis of today Assessment of tomorrow



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Climate policy should reduce strategic risks, not create new ones



For over three decades, the European Union's climate policy has been shaped by a simple conviction: the faster we replace fossil fuels with clean alternatives, the better our chances of stabilizing the planet's climate.

The logic remains sound. But the way it is translated into policy leaves much to be desired, with EU institutions building regulatory frameworks around a single technological solution – electrification – at the expense of diversity, innovation, and resilience.

Because of what Columbia Law School's Anu Bradford calls the "Brussels Effect," this ends up shaping decarbonization strategies worldwide.

Electrification is an essential part of any decarbonization strategy. With renewables comprising an ever-larger share of the global energy mix, electrifying homes, transport systems, and workplaces will lead to significant emissions reductions.

Sharply declining battery costs – vital to making electric vehicles accessible – will aid in this process.

Given this, programs like the Small Affordable Cars initiative and the Battery Booster package, which European Commission President Ursula von der Leyenhighlighted in her recent State of the Union address, are welcome.

But the belief that one technological solution can deliver decarbonization neglects a range of important economic, industrial, and geopolitical considerations.

Transport

Discussion about electrification often focuses on transport, which produces more than a quarter of the EU's greenhouse-gas emissions.

But climate policy should seek to reduce emissions across the entire value chain, from green steel and low-carbon materials to battery production.

Such a broad-based approach – increasingly reflected in industrial strategies worldwide – aligns climate ambition with the imperative of long-term resilience.

Even when it comes to transport, however, the EU's current approach falls far short.

There are currently well over 1.3 billion vehicles on the road worldwide – 249 million in the EU alone – and a significant decline is not expected in the next decade.

European climate policy typically focuses on replacing gas- or diesel-powered cars with EVs, but even under optimistic projections, the European fleet, let alone the global one, will not be replaced fast enough for electrification alone to deliver meaningful emissions reductions.

The expectation of large-scale replacement with EVs fails to account for the supportive infrastructure this requires

Decarbonizing the existing fleet will require different solutions, such as expanded use of renewable and synthetic fuels.

The expectation of large-scale replacement with EVs also fails to account for the supportive infrastructure this requires.

In Europe, charging infrastructure is expanding, but unevenly. In many other countries and regions, such infrastructure remains a distant prospect, because power systems are still fragile and access to electricity is limited.

Economies that are still working to deliver reliable, affordable electricity to homes, schools, and workplaces cannot be expected to implement fully electrified transport systems any time soon.

Against this backdrop, even when vehicles are being replaced, options like advanced hybrids and high-efficiency combustion engines must be made available.

Innovation arises from diversity

There is a more fundamental problem with the EU's single-minded pursuit of electrification.

Regulatory frameworks that emphasize any single approach risk constraining competition and innovation in other areas, including those we have not yet imagined.

Innovation arises from diversity, not uniformity, and unexpected breakthroughs can happen only if policymakers leave space for them.

The same goes for progress on existing technologies. The sharp decline in the price of wind and solar – once prohibitively expensive, but now the cheapest sources of electricity – reflects not only early subsidies, but also global competition, particularly from China.

The last thing the EU needs is for its entire decarbonization strategy to depend on another country

In fact, China has driven rapid advances in several green industries, including batteries, solar panels, electric motors, and mineral processing, influencing decarbonization strategies worldwide.

But while this example underscores the importance of openness, it also highlights the geopolitical vulnerabilities that a narrow approach to decarbonization can create.

The green supply chains that China now dominates – thanks to coherent, comprehensive, and long-term industrial strategy – are critical to electrification.

The last thing the EU needs is for its entire decarbonization strategy to depend on another country, especially one that has a history of leveraging its dominance for geopolitical ends, such as by imposing export controls on rare earths.

Climate policy should reduce strategic risks, not create new ones.

Regulatory determinism

Geopolitics is only part of the story. A range of economic factors – such as high energy prices, rising production costs, regulatory complexity, supply-chain uncertainty, and intensifying competition from subsidized foreign firms – can compound the pressure on particular industries or manufacturers.

We know that diversification is essential to economic resilience; the same is true for decarbonization strategies.



EU regulators must design rules that allow various technologies, old and new, to compete on performance

A final consideration is that putting all one's eggs in a single technological basket is risky from a fiscal perspective.

A less rigid approach, which allows market forces to deliver unexpected innovation, offers the best hope for progress at a time when public resources are under severe strain.

A robust climate policy should reflect the principle of technological neutrality: policymakers establish fixed objectives but leave pathways flexible.

Reaching climate neutrality by 2050 is non-

negotiable, but it would be arrogant to assume that we already know the only viable path to get there.

After all, a quarter-century ago, no one could have predicted today's breakthroughs in advanced biofuels and synthetic fuels.

EU regulators must recognize this and design rules that allow various technologies, old and new, to compete on performance.

Moreover, EU climate policy must account for geopolitical realities. In an era of strategic rivalry, industrial subsidies, and supply-chain fragmentation, a decarbonization strategy that increases dependencies and weakens Europe's industrial base is untenable.

If the EU is to realize its climate goals, without sacrificing its security or competitiveness, it must eschew regulatory determinism in favor of flexibility and pragmatism.

The choice is between a climate ambition that works and an existing climate strategy that could all too easily fail.

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