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**Global climate policy: striking a balance
between competition and cooperation**

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Global climate policy: striking a balance between competition and cooperation

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1. Climate policy and energy policy: two sides of the same coin

Energy policy and climate policy respond to different needs: energy policy answers the question "how to provide the energy needed to run the economy (safely with respect to possible shocks, both predictable and unpredictable)?" while climate policy adds further elements relating to the problem of climate change, namely "how to produce the energy needed, without harmful carbon emissions?"

In theory, the two policies should be connected, whereby the issue of energy production should not be separate from that of the emission reduction process. Indeed, it is very difficult to subordinate energy policy to climate policy, due to the complexities of pursuing the transition from a model based on fossil fuels to one based on clean resources. In the European Union (EU), the two policies differ in two respects: the level of government responsible and the system of governance¹.

While climate policy is a competence in the hands of the EU, energy policy remains a national competence, since it is of strategic importance to a country, shaped not only by historical and geographical reasons but also by industrial interests

and competitive advantages. With regards to climate policy, since the 1990s, at the Rio Summit in 1992 and the Kyoto Protocol in 1997, the EU has taken a leading role in international climate cooperation. Member countries willingly accepted climate policy as a European competence, which the Commission could handle by promoting the climate cause in various international fora. One reason for the consensus among member countries on environmental policy is that it had little relevance at the national level, with limited influence on national decision-making. In fact, while in the 1990s the mitigation goal was to stabilise emissions by 2000 compared to 1990 values, today the goal is in terms of a 55 per cent reduction compared to 1990 values by 2030. In the energy field, each country has retained national competence, therefore the freedom to choose its own energy supply strategy to ensure energy security, with the EU in the background to improve the integration of energy networks and markets.

Since 2015, to link national policies to European climate goals, the Energy Union, a governance based on coordination in the area of energy, has been launched. It resembles the European economic governance, where instead of a European fiscal policy, coordination of national fiscal policies based on fiscal rules is implemented. The Energy Union is based on five pillars: energy security, integration of the internal energy market, energy efficiency, research and innovation and, above all, decarbonisation. The European climate policy has thus become an integral part of the energy policy of member countries. To preserve this connection, National Climate and Energy Plans have been established. These documents, updated periodically, show how member countries intend to contribute to each of the five pillars in the 2021-2030 decade.

With the Paris Agreement, the issue of decarbonisation has become increasingly urgent, and the European Green Deal launched at the end of 2019, which set very ambitious targets, only strengthens the link between energy policy and climate policy. Indeed, the European climate policy is beginning to drive the energy policy of member countries². Another key element is energy security. For EU countries, with the gas crisis since February 2022 caused by the war in Ukraine, the goal of reducing emissions can be coupled with that of security of supply. While in the past countries could decide their energy mix as well as rely heavily on imports (especially gas from Russia), now the goal of phasing out dependence from a strategic security perspective may accelerate a shift towards a more sustainable supply, with an emphasis on renewable resources.

2. Goals and responsibilities in climate policy

In 2021, the International Energy Agency (IEA) released the report “Net Zero by 2050: A Roadmap for the Global Energy Sector”, which outlines the path needed to achieve zero emissions by 2050, according to the Paris Agreement goal (global temperature rise of 1.5°C). The focus is on the energy sector as the largest contributor to greenhouse gas emissions. On the one hand, the report noted that August 2023 was the hottest month recorded after July 2023, as well as reporting that globally, emissions from the energy sector reached a new record of 37 billion tons in 2022, i.e. 1% above the pre-pandemic level. On the other hand, the rate of adoption of clean technologies by countries leads the IEA to predict that peak emissions will be reached by 2030. Coupled with the fact that in the past two years, solar PV installations and electric car sales are on track to meet the "Net Zero by 2050" target, this is encouraging.

Following the pandemic and the energy crisis triggered by Russia's invasion of Ukraine, governments around the world have announced a series of measures to promote the adoption of clean technologies. The industrial sector is rapidly preparing to supply many of these technologies, particularly solar PV and batteries, whose production capacity, if fully implemented, would be sufficient to meet demand by 2030. However, the IEA warns that these developments will not lead to the goal of keeping temperature increases below 1.5 °C, as "It will also require: large, new, smarter and repurposed infrastructure networks; large quantities of low-emissions fuels; technologies to capture CO₂ from smokestacks and the atmosphere; more nuclear power; and large land areas for renewables."

In this huge collective effort to decarbonise, the largest emitters will have to play a major role. In terms of environmental damage, the US, the EU, and China are the most responsible. This is true when considering annual emissions – here China tops the list (31% of global emissions) ahead of the US (13%) and the EU (7%) – and cumulative emissions, with the US having seen its emissions increase since the beginning of the last century (24% of the total cumulative emissions), followed by the EU and China, which, for different reasons (climate sensitivity and ambition of the EU; recent and fast industrialisation of China), stand at 16% and 14%, respectively. These three players alone not only count for the largest share of total emissions, but also hold the largest share of global GDP (60%) and population (28%), but also play a key role in developing the technologies and value chains crucial to the transition.

Over the past two decades, their efforts have been crucial in drastically reducing the cost of solar and wind power, so renewable energy can be the basis for abandoning fossil fuels. How-

ever, the tripartite collaboration will have to continue, on an even larger scale, although in a very complex geopolitical context full of mutual tensions and rivalries. It remains to be seen whether and how well these tensions can serve the energy transition without causing security risks and vulnerabilities for counterparts.

3. Growing tensions between US, EU and China

Combining energy and climate policies is a critical issue especially from a global perspective. Although climate is a global public good that necessarily requires collective action, there are cross-cutting tensions between countries in various fields – economic, trade, technological – that can undermine climate cooperation and subordinate it to other priorities, such as energy security or technological supremacy. As in the past, today's world is divided into two blocs. While after the Second World War the division was between the US in defence of the capitalist order, and the former Soviet Union for the communist order, today the contrast is between the US (and the EU) and China mainly in the economic and technological sectors³.

A recent report by Chatham House and the Royal United Services Institute highlights the many complexities of the tri-lateral relationship between the US, the EU and China. Although the transatlantic relationship faces its own difficulties, the report clearly describes the relationship between the three superpowers as being critical of China⁴. The US considers China one of its most complex strategic challenges to manage. The dialogue between the two is characterised on the one hand by a growing hostility on the US side, as China is seen from a purely competitive perspective, and on the

other by the Chinese assertiveness that is spreading across different markets and spheres. The conflict with China in turn disturbs the US-EU relationship, which is characterised both by traditional convergences, in the sphere of trade and military assets within NATO, and by new divergences, such as different attitudes towards the common Chinese counterpart.

While the rivalry with China and the decoupling from it have become almost a defining feature of the United States's economic policy, the EU is proceeding cautiously: although it has begun to refer to China as a "systemic rival", it is responding to its aggressiveness with measured interventions aimed at reducing or eliminating distortions to the level playing field within the European single market, a fundamental pillar of European economic policy. The difference in approach is evident in the words of the President of the European Commission: "I believe it is neither viable – nor in Europe's interest – to decouple from China. Our relations are not black or white – and our response cannot be either. This is why we need to focus on de-risk – not de-couple [...] I believe we must leave space for a discussion on a more ambitious partnership and on how we can make competition fairer and more disciplined"⁵.

However, the US and the EU show the same nervousness towards Chinese state interventionism. China's aggressive statism, along with other causes such as the pandemic, which has exposed the fragility of global supply chains and the over-reliance on Chinese imports, have led to a series of domestic industrial policy counter-measures on both sides of the Atlantic. In recent years, countries have adopted more inward-looking economic strategies. China launched its "Dual circulation" strategy, i.e. orienting production towards the

domestic market, reducing dependence on foreign markets and still remaining open to the outside world; the US launched its "Buy American", i.e. investing in domestic manufacturing and pushing government spending toward the purchase of American goods; while the EU adopted the formula of "Strategic autonomy", which essentially tries to increase the ability to act autonomously in strategically important policy areas, from defence to energy.

4. Technological competition for climate

Domestic economic strategies can influence climate policy, potentially in a positive way. In this context, competition among countries, similar to cooperation, can be beneficial in achieving the common goal of decarbonisation. In particular, technological competition can benefit the community through the production of green technological innovations that are available on a large scale and at competitive costs. Attempts are underway (or have been made) between the three actors to integrate this competition in a spirit of cooperation.

In 2021, the President of the European Commission, von der Leyen, and the President of the US, Biden, launched the EU-US Trade and Technology Council (TTC) to normalise transatlantic relations following the Trump administration. The intent is to open new areas of cooperation, with operational working groups to transform policy decisions taken at annual meetings into tangible results⁶. Three high-level meetings have been held so far, the initial work of which (first meeting September 2021) was strongly influenced by the outbreak of the conflict in Ukraine, and the resulting energy supply problems and rising inflation, which shifted attention to cooperation on sanctions and export controls.

The operation of the TTC was then further affected by the Inflation Reduction Act (IRA) launched by the US and its series of measures to support the US economy to promote green technologies (tax breaks, subsidies, grants, and loan guarantees). On the other side, the EU has reacted fearing the risk that the IRA will interfere with the rules of the level playing field and lead to a subsidy race between the two parties. These fears evoke the old WTO trade dispute between the US and the EU over subsidies offered by both sides to their respective airlines, Boeing and Airbus. This long dispute was eventually resolved in 2021, precisely in the spirit of a rediscovered Atlantic partnership.

In this context, the role played so far by the TTC does not appear decisive in deepening technological collaboration and preventing disputes⁷. However, it serves to create a forum that institutionalises the convergence of views between the two partners on trade and technology, where, although each side operates differently, there is a common vision in terms of outcomes. With this in mind, the resulting statement from the third TTC meeting can be read as reassuring for the EU: “We acknowledge the EU's concerns and underline our commitment to address them constructively. We underline the TTC's role in achieving this and in supporting a successful and mutually supportive green transition with strong, secure, and diverse supply chains that benefit businesses, workers, and consumers on both sides of the Atlantic”⁸.

Although relations between the US and China are fraught with challenges regarding climate technology cooperation, this has not always been the case. In 2009, then Presidents Obama and Hu signed a series of clean energy agreements, including one that established the US-China Clean Energy Re-

search Center (CERC), with the goal to encourage clean technology innovation, diversify sources of supply, and improve energy efficiency. Unfortunately, the CERC experience was discontinued during the Biden administration in 2021, following disputes related to compliance with intellectual property rights. However, it represents the most ambitious model of US-China clean energy technology cooperation to date, through which the US and China have each invested \$200 million over nearly a decade in joint research, development and demonstration of new technologies⁹.

These examples of attempted technological cooperation highlight how the common goal of climate transition is not sufficient when other national economic policy priorities prevail and vastly different approaches to industrial policy emerge. However, strategic cooperation between the three major powers remains crucial, for at least three reasons.

First, even in such a competitive framework, there is still ample opportunity to invent and make available on a large scale new technologies that would be needed to decarbonise the global economy. Fossil fuels still meet around 80% of the world's energy needs. Although global greenhouse gas emissions appear to have remained fairly stable over the past decade, they will need to fall by half from current levels by 2030. Thus, despite progress, the level of deployment of these technologies is still too low globally. In addition to the need for even cheaper versions of the technologies we already have today, it is important to make strides in developing promising but still immature clean technologies, such as carbon capture and storage. Joint research and innovation projects, using the scientific resources of many countries, could expedite progress.

Second, the combination of aggressive competition and related protectionist practices slows down the transition process because it hinders the innovation process by stifling competition¹⁰. When the US imposes tariffs on clean technology imports from China to protect US manufacturing, on the one hand, companies operating in the US become less exposed to competition from China and thus will not experience the same kind of pressure to innovate and reduce costs; on the other hand, tariffs make Chinese solar panels, previously available cheaply, more expensive for end users, thus putting climate goals at risk.

Third, China has global control over the production of clean energy technologies (solar panels, batteries for electric vehicles and, to a lesser extent, wind turbines), as well as the extraction and processing of materials critical to the transition¹¹. However, over-concentration of green technologies in the hands of one country could be dysfunctional for the transition. In the future, there may be a risk that China will no longer be able to supply the rest of the world, for various reasons: prioritising its own domestic demand, natural disasters causing supply chain disruptions, and rising geo-political tensions. All of these would lead to the slowdown of the global decarbonisation process.

5. Multilateral cooperation for climate

The ambitions and approaches of countries also differ when it comes to climate policy. This results in the fundamental problem of policy fragmentation that hinders the solution of a problem with a global character. The climate is by its nature a global public good subject to market failures. As mitigation costs are high, countries have strong incentives

to take advantage of others' efforts because climate change, as well as the benefits of mitigation, do not depend on where emissions originate. Consequently, such behaviors frustrate the efforts of the most willing and do not respect the principle enshrined in the Paris Agreement of "common but differentiated responsibilities" (Art. 4(3) of the Paris Agreement), which would imply efforts according to different reduction capacities and in any case greater efforts by the major historical emitters. The issue of "free riding" is problematic given the modern context of international law in which countries are legally equal and have the right to political self-determination. This also applies to the field of climate policy, where mitigation solutions employed to meet the obligations signed in the Paris Agreement vary across countries in terms of ambition and the preferred instrument adopted.

In 2022, on the initiative of the German G7 presidency, the Climate Club was launched. It is an idea that echoes the work of Nobel economist William Nordhaus, who developed the concept of "clubs" in the context of environmental policy, proposing climate clubs that combine carbon prices and trade sanctions. The intent of the G7 Climate Club is to support effective implementation of the Paris agreements, through an inter-governmental discussion forum in which to promote greater cooperation and coordination and potential collective action¹². The focus of the Club is on the industrial sector, particularly on hard-to-abate sectors. Cooperation within the Club is based on three pillars: 1) understanding and sharing best practices for mitigation, which include both carbon pricing measures and non-price instruments; 2) transforming the industrial sector, focusing particularly on hydrogen, by promoting the best strategies for decarbonisa-

tion and creating the conditions for large-scale investment in research, development and innovation and new infrastructure; 3) promoting multilateral and bilateral cooperation for the purposes of the previous two pillars.

One of the tools provided by the Climate Club concerns the use of carbon pricing, which is the payment of a price for each ton of CO₂ emitted into the atmosphere. Despite being one of the most effective tools for incentivising the transition to clean forms of energy, today it only covers a portion of global emissions (23%). In the EU, through the Emission Trading System (ETS), carbon pricing currently covers about 45% of national emissions, although the goal is to broaden its scope to include not only the industrial sector, but also the transport and residential sectors. Furthermore, in parallel with a tightening of domestic carbon pricing, the EU has decided to introduce a Carbon Border Adjustment Mechanism (CBAM), a kind of tariff commensurate with the carbon content of imported goods limited to specific sectors¹³. The aim is to put companies located within the EU on an equal footing with companies operating outside Europe's borders, where such ambitious carbon pricing measures are not in force, and therefore incentivising their adoption.

The CBAM, which has come into force with a transitional data collection phase in October 2023, will become effective from 2026. Predictably, the CBAM proposal (put forward by the EU as a climate policy measure, not as a trade policy) was not well received by the EU's trading partners. The US has no carbon pricing system at the federal level (only some state-level initiatives), while China has recently introduced a domestic ETS, but still with very low pricing levels. While it is true that countries such as Russia, China, Turkey, the United

Kingdom, Ukraine and the US will be most exposed to the CBAM, countries with a greater economic and political role can rely on counter-measures to reduce its impact, for example by diversifying their exports to other countries or by embarking on a serious decarbonisation path (an effect that the EU also supports).

The CBAM and the Climate Club promote the same climate goals, but with two different rationales. The CBAM promotes decarbonisation by imposing a cost on trading partners that are not sufficiently ambitious in terms of emission reductions. The Climate Club intends to be an open and inclusive forum based on incentives that are not only economic, but also diplomatic, such as recognition in the international arena and the possibility of negotiating climate "packages" based for example on carbon pricing, expertise in the actual calculation of carbon content and financial aid for the climate. Rather than a G7 Club, perhaps it would be better understood as an Alliance or at least a Club extended to the G20, with the participation of China and India and open to countries of the Global South.

6. Conclusions

Achieving the Net Zero by 2050 appears complicated, but not impossible. It involves reconciling climate policy goals – once an alignment of ambitions has been established globally – with national energy policy priorities, as well as industrial policy strategies that also address concerns about energy security. Integrating the management of such policies with bilateral cooperation frameworks can facilitate coordination of different national actions, maintaining a balance between competition and technological cooperation that is

good for the ultimate goal of climate protection. A multilateral, open and inclusive structure, such as the one created through the Climate Club, provides the framework for climate diplomacy. The EU, a leader in climate cooperation, must keep the dialogue open with the key actors to create the critical mass needed to drive the process, without neglecting the views of countries less responsible (but more vulnerable) in terms of climate change.

Note

- 1 Pisani-Ferry, J., Tagliapietra S. e Zachmann G. (2023), “A new governance framework to safeguard the European Green Deal”, *Bruegel Policy Brief 18/2023*, <https://www.bruegel.org/policy-brief/new-governance-framework-safeguard-european-green-deal>
- 2 Tocci N. (2023), *A Green and Global Europe*, Polity Press.
- 3 Tocci (2023), op. cit.
- 4 Bergsen P., Froggat A., Nouwens V. e Pantucci R. (2022), “China and the transatlantic relationship”, *Chatham House and RUSI Briefing Paper*, <https://www.chathamhouse.org/2022/06/china-and-transatlantic-relationship>
- 5 Speech by the President Ursula von der Leyen on EU-China relations, 30 marzo 2023, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_23_2063
- 6 The ten working groups deal with: cooperation on technology standards in emerging technologies, such as artificial intelligence (AI) and internet of things; climate and green tech; secure and resilient supply chains, including semiconductors; security and competitiveness of information and communication technologies (ICT); data governance and technology platforms; the misuse of technology threatening security and human rights; export controls; investment screening; promoting access to and use of digital technologies by small and medium-sized enterprises (SMEs); and global trade challenges.
- 7 Riekeles G. E, e Lichfield C. (2022), “How the EU and the US should overcome their trade and supply chain disputes”, *EPC Policy Brief*, <https://www.epc.eu/en/Publications/How-the-EU-and-the-US-should-overcome-their-trade-and-supply-chain-dis%7E4cfcfc>

- 9 U.S.-EU Trade and Technology Council Joint Statement, <https://www.aeaweb.org/forum/3309/u-s-eu-trade-and-technology-council-joint-statement-12-5-22>
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- 12 G7 Germany, *Terms of Reference for the Climate Club* (2022), <https://www.g7germany.de/resource/blob/974430/2153140/353c0548bb27a75534468d624f738848/2022-12-12-g7-erklarung-data.pdf?download=1>.
- 13 Sectors characterised by high carbon intensity: cement, steel products, aluminum, fertilizer, electricity, and hydrogen.

CENTRO STUDI SUL FEDERALISMO

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