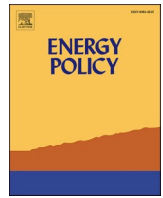




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Post-pandemic lessons for EU energy and climate policy after the Russian invasion of Ukraine: Introduction to a special issue on EU green recovery in the post-Covid-19 period

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ABSTRACT

The key policy priority for governments around the world during the 2020–2021 period was the response to the Covid-19 pandemic. However, this was swiftly replaced by an even graver urgent need to respond to Russia's full-scale attack on Ukraine in February 2022. This special issue aims to study the post-pandemic response and how related policy choices influence decarbonisation and energy transition efforts in the EU. While the special issue was initially conceived before Russia's invasion of Ukraine, the question of policy responses to critical situations remains even more relevant in the face of Russia's attempt to redraft the political landscape of Europe by force. The dichotomy of existing views on whether the crisis caused by the pandemic is an opportunity or a threat to the energy transition is also present in the discussion and perception of the EU's energy and climate policy after the Russian invasion at least temporarily shifted energy security and decarbonisation priorities. Analysing energy and climate dimensions of the EU's post-pandemic recovery can provide policy implications applicable to the energy security crisis connected to the Russian invasion of Ukraine.

1. Introduction

The series of crises since 2008 starting with the economic recession prompted some policymakers and scholars to identify a 'polycrisis' in the European Union (EU), a string of back-to-back, interrelated crises that have had serious negative consequences for the economy and society (Zeitlin et al., 2019). Although this notion was developed prior to the Covid-19 pandemic, crises linked to the pandemic and the Russian invasion of Ukraine surely fit into the current 'polycrisis'. The last two crises, while still ongoing, provide us with a set of natural experiments elucidating crucial climate and energy questions, as well as possible responses. The creativity and resilience of European societies and business, however, give us a reason for optimism. Both crises provide insights into the challenges and mitigation strategies connected to energy transition and decarbonisation efforts at both the EU and member states' level. These received a policy boost only a few months before the pandemic started, at the 2019 December European Council, when EU leaders agreed on creating a carbon-neutral economy by 2050 (European Council, 2019).

In cases of both the Covid-19 pandemic and the Russian invasion of

Ukraine, two camps can be identified within the EU. The first, 'price-sensitive' camp advocates a strong short-term reaction that would prevent the crises at hand from developing into a bigger, economy-wide, long-term economic problem including the risk of severe economic recession. Therefore, low-cost energy, mostly in the form of (often domestic) coal is supported in order to restart the EU economy following the pandemic and improve EU energy security in the wake of the Russian invasion of Ukraine. However, this approach clearly has negative climate consequences due to high levels of CO₂ emissions produced during the combustion of coal for electricity generation purposes.

The second, 'clean' camp highlights the need to use the opportunity provided by the crises at hand and take an energy transition 'leap' by supporting a full-scale decarbonisation and investing into long-term solutions. This strategy will not protect the EU and its member states from short-term hardship (expensive energy during the post-pandemic recovery or market coping with energy security challenges following the Russian invasion) but will pay off in the long term by strengthening the EU's independence from external energy suppliers and market pressures. While a higher employment of renewable sources of energy and demand reduction were the primary tools proposed to achieve this

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goal, investments in the area of energy efficiency were also discussed.

2. The Covid-19 pandemic and EU climate and energy policy

The key policy priority for governments around the world during the 2020–2021 period was the response to the Covid-19 pandemic. As governments implemented measures to contain the outbreak (Anderson et al., 2020; Weill et al., 2020) and respond to the ongoing health, social, and economic crisis, the consequences of these measures impacted economic and social activity (Bonaccorsi et al., 2020). The energy sector's response to the pandemic was no exception (Mastropietro et al., 2020; Santiago et al., 2021; Sovacool et al., 2020) and the ongoing energy transition was affected by anti-pandemic measures (Chong et al., 2022; Steffen et al., 2020; Vaka et al., 2020). While the short-term effects are noticeable (Hosseini, 2020; Salisu et al., 2020), two views of the long-term impact the pandemic has had on the energy transition emerged: the first sees it as a rupture in continuing the transformation of energy systems into a low (zero)-carbon regime, while the second views it as a break-through leap on the energy transition path away from the old carbon-based system.

While the industry and fossil fuel-based energy sector in particular have argued that immediate economic recovery needs to be prioritised over decarbonisation, thus supporting a business-as-usual model (Kuzemko et al., 2020), others – most notably the green and progressive-left part of the political spectrum and civil society actors – have claimed that the recovery presents a unique opportunity for leap-frogging the ‘greening’ of economies (Barbier, 2020; Elkerbout et al., 2020) and changing how people work and move (Kanda and Kivimaa, 2020). Nonetheless, similar to previous economic crises, the role of policy choices and the degree of government involvement remained crucial. The EU is an example of a region in which public funding has made a visible difference in the energy transition. For example, government subsidies for offshore wind and previously photovoltaic have led to significant capacity growth since 2009 (BP, 2023; European Parliament, 2020). Discussions of the European Green Deal (EGD), a project to decarbonise the EU's economy (Pianta and Lucchese, 2020), were influenced by the pandemic response. When the Covid-19 pandemic started at the beginning of 2020, it coincided with the EU's efforts (linked to EGD) to develop more ambitious goals, especially those connected to its 2030 energy and climate framework (Oberthür, 2019).

The diversity of government responses and views on whether there is an insurmountable trade-off between public health responses and their impact on decreasing economic activity that leads to recession (Ashraf, 2020) was visible across the EU. According to Steffen et al., “well-established and planned energy policies [were] put into question, particularly those that burden industries that [were] badly affected by the current crisis” (2020, p. 1137). For budgets of many EU member countries harshly impacted by the governments' efforts to support economies – even if that entailed skyrocketing national debt – the idea of ambitious (and therefore expensive) decarbonisation goals seems to be secondary. Indeed, research “highlight[ed] the importance of financial stimulus for renewable energy production” that is “effective in stimulating the reduction of CO₂ emissions” (Albulescu et al., 2020, p. 33629).

The European Commission developed the Next Generation EU fund (NGEU), which, together with the new multiannual financial framework (MFF) for 2021–2027, is supposed to support the post-pandemic recovery of EU members. According to the July 2020 ‘pandemic’ European Council conclusions, “the MFF, reinforced by NGEU, will be the main European tool” ensuring that the EU will be set “firmly on the path to a sustainable and resilient recovery, creating jobs and repairing the immediate damage caused by the Covid-19 pandemic whilst supporting the Union's green and digital priorities” (European Council, 2020, p. 2). This goal was supposed to be achieved by making the recovery green and digital – the EU obliged member states to assign a certain amount of post-pandemic recovery funds to the realisation of these two goals.

The European Climate Law made the goal of climate neutrality and

an aspirational goal for the Union to strive to achieve negative emissions after 2050 into a legal act. It also set a binding Union climate target of reducing net greenhouse gas emissions (emissions after deduction of removals) by at least 55% by 2030, compared to 1990. In 2021, the European Commission tabled the ‘Fit for 55’ package of revised climate and energy laws, further detailing its plans to set the EU on course towards meeting the aforementioned target. Nonetheless, the disagreement on how to set new national emissions targets so as to reach climate neutrality by 2050 continues, with some countries complaining about uneven burden-sharing and different starting positions.

3. EU climate and energy policy after Russia's invasion of Ukraine

The urgency of the policy response to the pandemic was swiftly replaced by an even graver urgent need to respond to Russia's full-scale attack on Ukraine in February 2022. The energy and climate dimension of this crisis was obvious from the very start. European vulnerabilities to Russia's use of energy as a weapon, observed already in the summer of 2021 (Bricout et al., 2022), became fully visible after Russia launched a full-scale military invasion of its neighbour. The Commission therefore proposed to minimise the EU's dependency on Russian energy sources in the short term and completely eliminate it in the mid-term (European Commission, 2022a). The main idea was to lower the EU's dependency on external energy supplies by increasing the utilisation of renewable sources of energy, energy efficiency, and energy savings. However, this approach fell short of effectively responding to the immediate challenge connected to low stocks of natural gas in underground EU storages and overall high gas prices on the continent since mid-2021 (Kotek et al., 2023).

The European Commission therefore proposed a voluntary decrease in natural gas consumption during the 2022/23 winter that was supposed to ensure sufficient amounts of gas in case member states needed emergency supplies (European Commission, 2022b). Rather difficult negotiations between member states resulted in an agreement on a 15%-decrease in natural gas consumption, accompanied by a series of derogations from this commitment for several member states. In spite of this, the latest data from the period between August 2022 and January 2023 show that the EU was able to decrease its gas consumption by 19% (Eurostat, 2023), thus strengthening its energy security and effectively diminishing its dependence on Russian gas. Further difficult negotiations between member states regarded sanctions against Russian oil (Barigazzi and Kijewski, 2022). The negotiating parties disagreed on the extent and severity of sanctions where elaborate compromises and exceptions had to be worked in.

Similar to the pandemic, two competing camps also emerged following the Russian invasion of Ukraine. Due to interruptions in Russian supplies of natural gas as well as its growing price, energy security quickly became a crucial issue within the EU (Mišák, 2022). Member states belonging to the first camp started to re-evaluate their energy policies in order to find domestic reserves that would allow them to improve their own energy security. Several member states chose coal as a suitable solution. For example, Germany decided to re-enter a significant coal-fired electricity generation capacity (Financial Times, 2022). Austria, the Czech Republic, and the Netherlands also started considering coal as a crucial energy security element (Kuzemko et al., 2022) – even if this was in direct contradiction to their climate goals – although they claimed that these were only short-term emergency detours from their long-term energy policy path, characterised by a decarbonisation trajectory.

However, the post-pandemic recovery experience shows the severity of consequences that even such short-term changes can have on climate change mitigation efforts. The post-pandemic recovery was fuelled especially by coal, used for electricity generation in 2021 more than during the pre-pandemic period (IEA, 2022a). As a result, global CO₂ emissions reached a new record in 2021 (IEA, 2022b), overshadowing a

sharp decrease in emissions during 2020 linked to pandemic measures (Le Quéré et al., 2021). A similar situation could also repeat in the following years should energy security continue to receive priority over decarbonisation goals due to the Russian invasion of Ukraine. Indeed, global energy-related CO₂ emissions grew by 0.9% in 2022, with emissions from coal “gr[owing] by 1.6% or 243 Mt, far exceeding the last decade’s average growth rate, and reaching a new all-time high of almost 15.5 Gt” (IEA, 2023, p. 3).

Contrary to the first camp, the second one focused on doubling down on renewable energy sources, energy efficiency, and other measures with the potential to reduce the share of fossil fuels in the EU’s energy mix. Many EU countries did not reverse their coal phase-out plans and stayed firmly on the decarbonisation trajectory, stressing the need to support low-carbon energy sources (including nuclear power). While the EU was able to replace (at least the majority of) Russian energy supplies rather successfully during 2022 and early 2023, this was very expensive and concerns about the sustainability of the tools used (for example, a significant increase in liquefied natural gas supplies and reduction in gas use by both the industry and households) are still present. Therefore, the Commission and several member states belonging to this second camp support a more long-term solution in terms of domestic renewable energy sources. The price hikes and overall volatility led to unprecedented individual industrial and household measures, including fuel switching (biomass and heat pumps; Rosenow et al., 2022), some of which was supported through government incentives and policies (Nosko et al., 2022). As example at point the market for heat pumps in Europe can be used, which has been growing for the past two years (2021 and 2022) at unprecedented rates of over 33% on average, with Germany reaching a 53%-growth and Poland experiencing more than a 100-fold increase in heat pumps demand (EHPA, 2023a, 2023b).

However, the EU energy crisis connected to the Russian invasion of Ukraine is still unveiling, as are the EU’s responses to the attack. Russian natural gas has yet to be sanctioned by the EU, as does the nuclear sector, although Russian nuclear fuel and technology play a very important role in the EU’s energy sector (Szulecki and Overland, 2023). To overcome the energy crisis following February 2022, the EU has found new crucial energy partners (especially the USA) and strengthened cooperation with existing ones (for example, Norway).

This special issue aims to study the post-pandemic response and how related policy choices influence the decarbonisation and energy transition efforts in the EU. Its main research question asks how the post-pandemic recovery affects the EU’s decarbonisation efforts. Moreover, it tackles related research questions regarding what influences governments’ decisions to either (a) use the pandemic as an opportunity to leapfrog their energy transition and decarbonisation, or (b) deflect away from the transformation in order to avoid change and maintain their current economies? While the special issue was initially conceived before the Russian invasion of Ukraine, the question of policy responses to critical situations remains even more relevant in the face of Russia’s attempt to redraft the political landscape of Europe by force. While the impact of and response to the invasion cannot be conclusively assessed yet, it appears to serve as a catalyst for previously observed trends.

Furthermore, the dichotomy of previously observed views on whether the crisis caused by the pandemic is an opportunity or a threat to the energy transition is also present in the discussion and perception of the EU’s energy and climate policy after the Russian invasion at least temporarily shifted energy security and decarbonisation priorities. Due to the similarities between these two crises, we claim that examining the policy tools, reactions of EU institutions, or position of member states connected to the former can help us understand the latter. Moreover, analysing energy and climate dimensions of the EU’s post-pandemic recovery can provide policy implications applicable to the energy security crisis stemming from the Russian invasion of Ukraine. The last two years (2021 and 2022) have highlighted the EU’s unprecedented response and adaptation potential, including rapid fuel switching at both the individual household and industry level. Moreover, this period

offers opportunities to observe the market-incentivising acceleration of decarbonisation, as well as cases of worrisome market failures which slow down the energy transition by undermining public trust and the political legitimacy of climate and energy transition strategies.

4. Structure of the special issue

This special issue contains eight papers covering the EU’s green recovery from several perspectives. They examine systematic changes in the EU’s decarbonisation efforts and energy transition caused by the pandemic crisis. Crnčec et al. (2023) argue that the governance framework developed to support the post-pandemic recovery created a strong financial and policy leverage to accelerate the green transition, while closing the gap between more and less climate-ambitious member states. Especially those EU members that have traditionally relied on EU funds seized the opportunity presented by the post-pandemic recovery. Nonetheless, the authors claim that the crisis had an evolutionary rather than revolutionary impact and note that while the coherence between energy and climate goals remains high, the EU’s energy transition has so far failed to integrate biodiversity.

Mišák and Oravcová (2022) also look at the new governance model connected to financing the EU’s green recovery, which has roots in energy and climate policy governance. They specifically argue that the European Commission pushed member states to align their national post-pandemic recovery preferences with those of the Commission. The new governance model that allowed the Commission to exercise such pressure was first applied in the area of energy and climate governance, where the Commission used existing commitments to pressure member states into pledging to more ambitious national targets than they had originally intended. After this ‘test’ was successful, the Commission used a very similar governance model to push member states to make their post-pandemic recovery digital and green.

In their paper, Nosko and Ušiak (2023) use Covid-19 as a natural experiment to analyse the impact of newly created opportunities for the participation of civil society in policy formation in the climate and energy policy area. They also examine the effect of Commission funding on the participation of civil society in policy formation in Brussels. The authors argue that the pandemic had a minimal equalising impact on the access of civil society organisations to the Commission, which stayed disproportionately influenced by the business sector. Furthermore, they identify physical presence at meetings in Brussels as one of the factors behind shareholders’ successful access to EU policymaking.

The special issue also includes an important sectoral case study focusing on the supply and prices of natural gas. Kotek et al. (2023) analyse the interplay between the price increases which occurred when Gazprom started to withhold supplies in the second half of 2021, ahead of Russia’s invasion of Ukraine. They also portray the paradox of oversized planned investment into new infrastructure for natural gas: since this fuel is expected to play only a transitional role, these investments lack long-term economic rationale. They note that the realisation of the 5th List of the Projects of Common Interest adopted by the Commission in November 2021 would significantly reduce not only EU prices but also the potential of the uniform voluntary demand response to significantly reduce prices. Kotek et al. also analyse the possible impact of introducing European strategic gas reserves and argue that while it can bring temporary price relief it is not a cost-efficient solution. However, security of supply considerations can outweigh negative economic outcomes. Finally, they observe the possible mid-term impact of sustained high prices on strengthening the mistrust of the commodity and speeding up the move away from gas in all sectors.

Panarello and Gatto (2023) examine the role of public attitudes in the EU’s energy transition. They provide insights into the EU citizens’ pre-pandemic perception of some key factors for the renewable energy transition, sustainability, and resilience, which may be crucial for finding prime energy policy indications useful for the post-pandemic recovery. Their results point to interrelated renewable energy

transition issues for the EU, including resilience, vulnerability, cooperation, competition, sovereignty, security, safety, and climate change. Panarello and Gatto's findings have important social and environmental implications for energy policy modelling. The diversity of sorting results, regional-level differences, and embodied domestic characteristics allows for macro-regional explorations.

Romanova (2023) studies the external dimension of the EU's post-pandemic recovery. She looks at the ambiguity of the Union's message regarding the EDG aimed at its external partners (especially Russia) and examines the tension between its neoliberal and geopolitical approach in the post-Covid period. The neoliberal narrative presupposed a fine-tuned multilateralism and market openness, with an opportunity for Russia to join the EU's success story. The realist narrative is based on notions of relative gains, strategic autonomy/sovereignty, market corrections by public authorities, borders, and closed alliances. Russia was used in this narrative to encourage more EU autonomy and strategic partnerships. The article demonstrates how and why the geopolitical narrative was strengthened between 2020 and 2021. No policy opening for selective engagement with Russia emerged; the discourse prepared the EU for a policy shift made in response to Russia's assault on Ukraine in February 2022.

Koasidis et al. (2022) analyse the link between emissions reduction and employment in the energy sector. They argue that it is possible to allocate recovery packages to align mitigation goals with both short- and long-term employment in the energy sector, although overemphasising longer-term sustainability of new energy sector jobs may be costlier and more vulnerable to uncertainties compared to prioritising environmental and short-term employment gains. Robust portfolios with balanced performance across objectives consistently feature small shares of offshore wind and nuclear investments, while the largest chunks are dominated by onshore wind and biofuels – two technologies with opposite impacts on short- and long-term employment gains.

Smol (2022) examines changes in Green Deal Strategies caused by the Covid-19 pandemic by assessing the definitions, strategies, and importance of the Green Deal for post-pandemic recovery plans in various regions of the world. The paper provides a comprehensive inventory of the definitions of Green Deal concepts and strategies that were initiated at the national (United States, United Kingdom, South Korea), European (European Green Deal), and international (United Nations) level. Smol argues that there is a strong need to include green solutions in post-Covid-19 recovery plans and that Green Deal Strategies can play a strategic role in the 'greening' of recovering economies.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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