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Germany's 2022 Energy Crisis Response and Post-Crisis Climate Diplomacy

Almanya'nın 2022 Enerji Krizine Tepkisi ve Kriz Sonrası İklim Diplomasisi

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ABSTRACT

This article analyzes how Germany's response to the 2022 energy crisis affected its climate action and international credibility within the United Nations Framework Convention on Climate Change (UNFCCC). The energy crisis, which resulted in a significant decrease in Russian gas supplies to Europe, made the country build its Liquefied Natural Gas (LNG) infrastructure, postpone its nuclear phase-out, temporarily revive its coal-fired power plants, and make legislative adjustments. Given Germany's long-standing active engagement in international climate action, these decisions cast doubt on its reliability in global climate diplomacy. Despite facing credibility issues at the Conference of the Parties (COP) 27, Germany worked to rebuild its image through increased climate finance commitments and greater support for decarbonization efforts at COP 28 and COP 29. According to the findings, the country's perceived consistency was undermined by emergency measures, but its financial assistance and diplomatic engagement contributed significantly to restoring its credibility. As a result, the German case serves as a key point of reference for future climate governance in times of crisis and highlights the difficulties developed countries encounter in maintaining a balance between their urgent national interests and their responsibilities under global climate action.

Keywords: Germany, UNFCCC, Climate commitments, Energy security.

ÖZET

Bu makale, Almanya'nın 2022 enerji krizine verdiği tepkinin iklim eylemini ve Birleşmiş Milletler İklim Değişikliği Çerçeve Sözleşmesi (UNFCCC) kapsamındaki uluslararası güvenilirliğini nasıl etkilediğini analiz etmektedir. Rusya'nın Avrupa'ya gaz tedarikinde önemli bir düşüşe yol açan enerji krizi, ülkenin Sıvılaştırılmış Doğalgaz (LNG) altyapısını inşa etmesine, nükleerden çıkışını ertelemesine, kömürlü termik santrallerini geçici olarak canlandırmasına ve yasal düzenlemeler yapmasına neden olmuştur. Almanya'nın uzun süredir uluslararası iklim eylemlerine aktif katılımı göz önüne alındığında, bu kararlar küresel iklim diplomasisindeki güvenilirliği konusunda soru işaretleri yaratmıştır. Taraflar Konferansı (COP) 27'de güvenilirlik sorunları yaşamasına rağmen Almanya, COP 28 ve COP 29'da artan iklim finansmanı taahhütleri ve karbonsuzlaştırma çabalarına daha fazla destek vererek imajını yeniden inşa etmeye çalışmıştır. Bulgulara göre, ülkenin tutarlılık algısı acil durum önlemleriyle zedelenmiş, ancak mali yardımları ve diplomatik angajmanı güvenilirliğini yeniden kazanmasına önemli ölçüde katkıda bulunmuştur. Sonuç olarak, Almanya örneği kriz dönemlerinde gelecekteki iklim yönetişimi için önemli bir referans noktası teşkil etmekte ve gelişmiş ülkelerin acil ulusal çıkarları ile küresel iklim eylemi kapsamındaki sorumlulukları arasında bir denge kurmakta karşılaştıkları zorlukları vurgulamaktadır.

Anahtar kelimeler: Almanya, UNFCCC, iklim taahhütleri, enerji güvenliği.

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Introduction

As one of the strongest supporters of proactive climate policies, Germany became known as a climate pioneer and played a significant role in UN climate negotiations. By the early 2020s, the country had enacted strict emissions regulations to reduce greenhouse gas (GHG) emissions by at least 65% by 2030 compared to 1990 levels to reach net-zero emissions by 2045.[1] Additionally, the country committed to phasing out nuclear power plants by 2022 and coal-fired power plants by 2038.[2] All these policies were supported by powerful international climate diplomacy, so Germany positioned itself as an ambitious and active supporter of global climate action.

Due to its strong domestic action and significant climate finance commitments, the country has been perceived as a connector of developed and developing countries during UNFCCC meetings.[3] However, Germany's image faced a major threat after its actions after the 2022 energy crisis. Following the Russian Ukrainian war and the subsequent sharp decline in Russian gas supply to Europe, Germany faced intense pressure to find other energy sources to maintain its energy security and economic stability, since the country heavily relied on gas imports. With a significant decrease in gas imports, the country accelerated the development of LNG infrastructure, reactivated its coal plants, postponed the nuclear phase-out, and made legislative adjustments.[4]

Germany's crisis-driven use of fossil fuels has generated plenty of scholarly discussion about whether such emergency measures are consistent with its international climate pledges. The country is one of the most powerful climate actors in the EU, and its actions not only affected its domestic goals but also raised questions about the legitimacy and durability of international climate action. There are diverging perspectives in the literature about the issue. Scholars such as Mark Scott argue that energy security concerns have reshaped national priorities by sacrificing climate goals in favor of immediate economic and energy stability.[5] Hence, it calls into question the normative strength of international climate cooperation. Susanne Dröge and Marian Feist also point out that the German-led G7 talks in 2022 demonstrated a wider global shift with short-term energy security demands dominating decarbonization efforts and highlighting the vulnerability of global climate governance to geopolitical shocks.[6]

Several scholars assert that these actions demonstrate deviations in Germany's climate and energy policies. According to Dimitrios Glynos and Hendrik Scharf, the country's significant reliance on natural gas and phase-out of nuclear power during the 2022 energy crisis revealed structural weaknesses in its energy system. Especially, the difficulty of guaranteeing decarbonization while preserving supply security in an infrastructure that depends heavily on fossil fuels.[7] Dzhanneta Medzhidova notes that Germany's simultaneous withdrawal from nuclear power and dependence on fossil fuel imports revealed an underlying structural reliance on carbon-intensive infrastructure.[8] Also, Belaïd et al. noted that the crisis exposed the speed at which decarbonization might be deprioritized, which casts doubt on presumptions regarding the certainty of clean energy pathways.[9] Additionally, the country's decision called into question its credibility on cli-

1 Federal Republic of Germany. *Federal Climate Change Act (Bundes-Klimaschutzgesetz – KSG).* Accessed April 21, 2025. https://www.gesetze-im-internet.de/englisch_ksg/englisch_ksg.html

2 Tobias Haas, Jeremias Herberg, and David Löw-Beer, "From Carbon Democracy to Post-Fossil Capitalism? The German Coal Phase-out as a Crossroads of Sustainability Politics," *Sustainability: Science, Practice and Policy,* vol. 18, no. 1 (2022): 384–99, https://doi.org/10.1080/15487733.2022.2069542.

3 Miranda A Schreurs. "The Politics of Phase-Out." *Bulletin of the Atomic Scientists*, vol.68, no.6 (2012): 30–41. https://doi.org/10.1177/0096340212464359

4 Dimitrios Glynos, and Hendrik Scharf. "Postponing Germany's Nuclear Phase-out: A Smart Move in the European Energy Crisis?" *Energy Policy,* vol. 192 (2024): 1-10. https://doi.org/10.1016/j.enpol.2024.114208

5 Mark Scott. "Planning for a Just Energy Transition: If Not Now, When?" *Planning Theory & Practice,* vol. 23, no. 3 (2022): 321-326. https://doi.org/10.1080/14649357.2022.2082711

6 Susanne Dröge, and Marian Feist. *The G7 Summit: Advancing International Climate Cooperation? Options and Priorities for the German G7 Presidency.* SWP Comment 2022/C 34. Berlin: Stiftung Wissenschaft und Politik, May 19, 2022. https://doi.org/10.18449/2022C34

7 Dimitrios Glynos, and Hendrik Scharf, 2024.

8 Dzhanneta Medzhidova. "Return of Coal: A Short Visit or a Long Stay?" *BRICS Journal of Economics*, vol. 3, no. 4 (2022): 209-229. https://doi.org/10.3897/brics-econ.3.e94712

9 Fateh Belaïd, Aisha Al-Sarihi, and Raed Al-Mestneer. "Balancing Climate Mitigation and Energy Security Goals amid Converging Global Energy Crises: The

mate change. According to Sébastien Jeudy-Hugo & Sofia Errendal, and Vinichenko et al., deviating from the coal-exit trajectory undermined Germany's moral authority at the UNFCCC, reducing its ability to shape climate norms.[10]

Trust is another major issue in literature, particularly between developed and developing nations. Nikita Sud criticized the country's coal revival, pointing out that it violates climate justice principles and undermines North-South trust in the UNFCCC.[11] Hägele et al. support this perspective by claiming that such measures give developing countries negative signals, which are usually asked to limit their use of fossil fuels without the flexibility enjoyed by developed nations.[12] Susanne Dröge and Marie Feist similarly highlight the disconnect between the country's climate diplomacy during its G7 presidency and its emergency domestic policies.[13] Moreover, Perino et al. stress the interdependence between German and EU climate targets and suggest that the country's failure to meet its goals could harm the EU's overall credibility in global climate leadership.[14] Mehling et al. further argue that consistent domestic action by leading states is essential for the successful coordination of international mitigation strategies.[15]

Despite these concerns, some scholars present an optimistic view. Brunsch et al. and Nacke et al. suggest that while the return to coal contradicts long-term objectives, it can be defensible as a short-term emergency response so long as it is followed by aggressive corrective policies such as higher CO_2 pricing, structural reforms, and accelerated renewables.[16] Also, system modeling of various authors such as Abuzayed & Niklas Hartmann, Soren Graupner & Thomas Bruckner, Subash Kumar & Reinhard Madlener shows that Germany can still meet the 1.5°C targets if ambitious mitigation strategies are implemented suddenly.[17] Traber et al. even propose a fully renewable energy system by 2030 that is both economically viable and aligned with the country's carbon budget responsibilities.[18]

Researchers have different views on Germany's approach to the 2022 energy crisis. On one hand, several researchers argue that the 2022 energy crisis posed a significant challenge to the country's reputation as a climate pioneer and raised critical concerns about the integrity of global climate governance. On the other hand, some scholars consider these decisions as necessary and pragmatic emergency responses to an unprecedented geopolitical shock, emphasizing that short-term reversals do not preclude a return to ambitious long-term decarbonization pathways if followed by corrective policy action.

Role of Green Investments". *Renewable Energy,* vol. 205 (2023): 534-542. https://doi.org/10.1016/j.renene.2023.01.083

10 Sébastien Jeudy-Hugo, and Sofia Errendal. *Towards an Impactful Mitigation Work Programme under the UNFCCC.* OECD/IEA Climate Change Expert Group Papers, no. 2023/03. Paris: OECD Publishing (2023). https://doi.org/10.1787/36da89de-en; Valeriya Vinichenko, Margaux Vetier, and Jessica Jewell. "Phasing out Coal for 2°C Target Requires Worldwide Replication of Most Ambitious National Plans." *Environmental Research Letters,* vol. 18, no. 1 (2023): 1-12. https://doi.org/10.1088/1748-9326/acadf6

11 Nikita Sud. "Unjust Energy Transition: Vignettes from the COPs, Climate Finance and a Coal Hotspot." *World Development,* vol. 190 (2025): 1-13. https://doi.org/10.1016/j.worlddev.2024.106906

12 Ramona Hägele, Gheorghe Iacobuță, and Joachim Tops. "Addressing Climate Goals and the SDGs through a Just Energy Transition? Empirical Evidence from Germany and South Africa" *Journal of Integrative Environmental Sciences* vol. 19, no. 1 (2022): 85-120. https://doi.org/10.1080/1943815X.2022.2108459

13 Susanne Dröge, and Marian Feist, 2022.

14 Grischa Perino, Johannes Jarke-Neuert, Felix Schenuit, Martin Wickel, & Cathrin Zengerling. "Closing the Implementation Gap: Obstacles in Reaching Net-Zero Pledges in the EU and Germany" *Politics and Governance*, vol. 10, no.3 (2022): 213-225. https://doi.org/10.17645/pag.v10i3.5326

15 Michael A. Mehling, Gilbert E. Metcalf, and Robert N. Stavins. "Linking Climate Policies to Advance Global Mitigation." *Science*, vol. 359, no. 6379 (2018): 997-998.

16 Daniel Brunsch, Julian Radek, Lars Ostmeier, and Christoph Weber. "Midterm Perspectives on Natural Gas after the European Gas Crisis: Reviewing German Energy Transition Studies." *Renewable and Sustainable Energy Reviews,* vol. 210 (2025): 1-12. https://doi.org/10.1016/j.rser.2024.115223; Lola Nacke, Vadim Vinichenko, Aleh Cherp, Avi Jakhmola, and Jessica Jewell. "Compensating Affected Parties Necessary for Rapid Coal Phase-out but Expensive If Extended to Major Emitters." Nature Communications, vol. 15, no. 1 (2024): 1-16. https://www.nature.com/articles/s41467-024-47667-w

17 Anas Abuzayed, and Niklas Hartmann. "MyPyPSA-Ger: Introducing CO2 Taxes on a Multi-Regional Myopic Roadmap of the German Electricity System towards Achieving the 1.5 °C Target by 2050." *Applied Energy,* vol. 310 (2022): 1-24. https://doi.org/10.1016/j.apenergy.2022.118576; Soren Graupner, and Thomas Bruckner. "Effects of Accelerated Coal Phase-out and Enhanced Renewables on Redispatch and Carbon Distribution." *2022 International Conference on Electrical, Computer and Energy Technologies (ICECET),* July 20, 2022: 1-6. https://doi.org/10.1109/ICECET55527.2022.9872560; Subhash Kumar and Reinhard Madlener. "Energy systems and COP21 Paris climate agreement targets in Germany: an integrated modeling approach" *2018 7th International Energy and Sustainability Conference (IESC)* (2018): 1-6.

18 Thure Traber, Franziska Simone Hegner, and Hans-Josef Fell. "An Economically Viable 100% Renewable Energy System for All Energy Sectors of Germany in 2030." *Energies,* vol. 14, no. 17 (2021):1-17. https://doi.org/10.3390/en14175230

As a result, the country's experience during and after the 2022 energy crisis illustrates how easily geopolitical crises can undermine international climate policy and diplomacy. Germany, a leader in combating climate change, came under scrutiny for its actions during the crisis. The German case highlights a broader challenge many developed countries face, which is balancing urgent national energy demands with the long-term goal of reducing emissions.

Earlier studies mainly focused on Germany's energy transition from a domestic policy or EU level perspective. Hence, they frequently overlook how the country attempted to regain its reputation in an international setting and addressed risks to its credibility. In this realm, this study contributes to the literature in three ways. Firstly, it integrates policy documents, negotiation outcomes, and UNFCCC sources to demonstrate how Germany managed reputational damage in climate negotiations. Second, it offers a COP-centered, temporal analysis of Germany's post-crisis climate diplomacy with a focus on COP 27, COP 28, and COP 29. Finally, it uses the concepts of credibility, norm entrepreneurship, and adaptive diplomacy to analyze how developed countries manage geopolitical challenges while maintaining legitimacy in climate governance.

This article argues that despite facing credibility issues at COP 27, Germany worked to rebuild its image through increased climate finance commitments and greater support for decarbonization efforts at COP 28 and COP 29. The findings demonstrate that the country's perceived consistency was undermined by emergency measures, but its financial assistance and diplomatic engagement contributed significantly to restoring its credibility. In the end, this case illustrates how strategic international engagement can partially offset domestic policy reversals. It also highlights the growing importance of climate finance and solidarity as tools for maintaining diplomatic legitimacy in an era of crises.

The research relies on qualitative document analysis to examine how Germany's response to the 2022 energy crisis affected its role and credibility in international climate governance. In this case, the selection of sources is based on the country's international climate pledges, domestic measures, and participation in COPs (COP 27-29). These include official German legislative documents (e.g., the Climate Change Act and Energy Security Act), submissions to the UNFCCC, Earth Negotiations Bulletin reports, and academic studies. In addition, statistical data from Destatis and the IEA complement the qualitative analysis in the article.

To contextualize Germany's shifting position in international climate governance, the following sections look at the development of the country's domestic climate policy, its reaction to the 2022 energy crisis, and its diplomatic actions within the UNFCCC framework. In this regard, the first section will focus on the evolution of Germany's climate policies and its latest contributions to the UNFCCC. The second section will present the country's energy crisis response in 2022, namely temporary reactivation of coal-fired power plants, the construction of LNG infrastructure, the postponement of nuclear power plants' phase-out, and legislative changes. The third section will investigate Germany's climate diplomacy after the crisis by analyzing the country's stance and credibility at COP 27, COP 28, and COP 29. Finally, the last section analyzes and discusses Germany's performance in pursuing climate diplomacy after the energy crisis.

To analyze how Germany's climate diplomacy evolved following the 2022 energy crisis, this article draws on the concepts of credibility, norm entrepreneurship, and adaptive diplomacy. These provide the analytical tools to assess Germany's shifting role within the UNFCCC. The following section outlines this conceptual framework.

Conceptual Framework

The article examines Germany's post-crisis climate diplomacy through three lenses. These are credibility, norm entrepreneurship, and adaptive diplomacy. These concepts are essential for understanding how governments participate in global climate governance. In the context of climate diplomacy, credibility is the ex-

tent to which a nation's internal policies align with its international commitments. Since there is no formal enforcement under the UNFCCC, how other countries perceive a state has a significant impact on its influence in climate governance.[19]

In this case, the failure of developed countries to engage in expected climate action can negatively impact their credibility and leadership. Therefore, restoring trust necessitates diplomatic initiatives that reassert commitments to climate goals.[20] Strategies for credibility restoration typically involve a transparent explanation for deviations and enhanced commitment to the recent climate goals. It also includes taking tangible steps to demonstrate a sincere desire to align domestic policy with international commitments.

Moreover, the concept of norm entrepreneurship refers to the promotion of new standards and shared expectations of appropriate behavior for actors with a given identity. Hence, norm entrepreneurs are actors who actively promote new norms, persuade others to adopt them, and embed them into international discourse and institutions.[21] Germany has long been regarded as a norm entrepreneur in climate governance, advocating for renewable energy, climate finance, and high mitigation ambition. However, norm entrepreneurship requires consistency and legitimacy. Crisis-induced reversals, such as the delay in nuclear phase-out and reactivation of coal plants, challenged Germany's normative leadership. In response, the country shifted its emphasis toward climate finance, just transition narratives, and technological solutions, so that it can be seen as an effort to restore its role in norm promotion through different channels.

Lastly, the article uses the concept of adaptive diplomacy to explain how Germany managed reputational risks while actively participating in climate negotiations. Adaptive diplomacy is known as the ability of countries to adapt their actions in response to internal limitations or external shocks.[22] In the case of Germany, this means strengthening climate funding pledges and aligning with EU stances on the transition away from fossil fuels to cover up for short-term mitigation reversals. In the end, this article applies these three frameworks to analyze how the 2022 energy crisis challenged Germany's established credibility and to investigate the country's diplomatic responses at COP 27, COP 28, and COP 29 as strategic efforts to restore its international standing within the UNFCCC framework.

Evolution of Germany's Climate Policies and the UNFCCC

The legal and institutional framework for global climate governance was established by the UNFCCC in the 1992 Rio Earth Summit and entered into force in 1994. It imposes differentiated obligations on developed and developing countries based on the principle of "common but differentiated responsibilities." In this realm, developed countries are urged to take the lead in lowering GHG emissions, to share regular national inventories, and to assist developing nations through technology transfer, capacity building, and climate finance.[23] In this framework, Germany has always been one of the most active and cooperative partners. The country has historically met these obligations and often exceeded them, positioning itself as a proactive actor in climate diplomacy.

There have been significant achievements since COP 1 in Berlin. The Kyoto Protocol was the result of the COP 3 in Kyoto, and it established legally enforceable carbon reduction objectives for developed countries. COP 15 in Copenhagen introduced voluntary commitments that marked a political turning point in climate action. By committing all parties to NDCs targeted at keeping global warming well below 2°C, the Paris

19 Robert O. Keohane, and David G. Victor. "The Regime Complex for Climate Change." *Perspectives on Politics* vol. 9, no. 1 (2011): 7–23. https://doi.org/10.1017/S1537592710004068.

20 George W. Downs, and Michael A. Jones. "Reputation, Compliance, and International Law." *The Journal of Legal Studies* vol. 31, no. S1 (2002): S95-S114. https://doi.org/10.1086/340405

21 Martha Finnemore, and Kathryn Sikkink. "International Norm Dynamics and Political Change." *International Organization* vol. 52, no. 4 (1998): 887–917. https://doi.org/10.1162/002081898550789

22 Karin Bäckstrand, and Jonathan W. Kuyper. "The Democratic Legitimacy of Orchestration: The UNFCCC, Non-State Actors, and Transnational Climate Governance." *Environmental Politics* vol. 26, no. 4 (2017): 764–88. https://doi.org/10.1080/09644016.2017.1323579

23 United Nations Framework Convention on Climate Change (UNFCCC). "Understanding the UN Climate Change Regime". Accessed June 21, 2025. https://unfccc.int/resource/bigpicture/#content-understanding-the-un-climate-change-regime

Agreement at the COP 21 became a landmark.[24] In these COP meetings, Germany has taken the lead by hosting COP 1, exceeding its Kyoto objectives, and actively influencing EU positions under the Paris Agreement.[25]

Between 1990 and 2020, Germany lowered its GHG emissions by more than 40%, thanks to increased renewable energy, energy efficiency measures, and environmental regulations.[26] However, the 2022 energy crisis forced a temporary return to coal and delayed the nuclear phase-out, raising concerns about the consistency of its leadership. These reversals have undermined Germany's normative credibility and hindered its role as a model UNFCCC party, even if the country is still officially in compliance with its reporting and mitigation commitments.

Germany first became involved with climate policy in the 1990s when it enthusiastically supported international climate agreements such as the Kyoto Protocol. In the following years, the country was able to achieve significant emission reductions through combining proactive environmental legislation with economic reconstruction. As a result, the country decreased its GHG emissions by approximately 41% compared to 1990 levels in 2020.[27] These initiatives placed the country as a pioneer in global climate action and put it on an ambitious pathway to achieving its climate goals.

Domestically, the Energiewende launched in the 2000s, which is a comprehensive energy transition strategy for Germany. The strategy set ambitious targets with the goal of moving the country away from fossil fuels and nuclear energy toward a sustainable, low-carbon energy system. The Renewable Energy Sources Act (EEG) was a central pillar of this strategy since it promoted an increase in wind and solar power.[28] By 2021, renewables in the country made up around 40-45% of electricity generation, which is a transformation that influenced global renewable policy adoption.[29] Germany also legislated the nuclear phase-out in 2002 after the 2011 Fukushima disaster, with the last reactors set to close in 2022.[30]

Recognizing coal as its largest source of CO_2 emissions, the country convened a Coal Exit Commission in 2018. Its 2019 recommendation to phase out coal by 2038 became law in 2020, although the government stated its ambition to advance the exit to 2030.[31] Germany also enacted its Federal Climate Change Act in 2019, updated in 2021 and 2024. The law sets binding annual sectoral emissions budgets and commits the country to net-zero GHG emissions by 2045. With the support of legal enforcement measures in the case that sector targets are missed, interim targets include a 65% emissions reduction by 2030 and an 88% reduction by 2040.[32]

Beyond the Federal Climate Change Act, Germany has strengthened its long-term decarbonization pathway with a wider range of climate policies. Since its introduction in 2005, the country has been an active participant in the EU Emissions Trading System (ETS). This mechanism has played a vital role in reducing emissions from the power and industrial sectors.[33] Complementing this, the German government introduced the

24 Jonathan Kuyper, Heike Schroeder, and Björn-Ola Linnér. "The Evolution of the UNFCCC." *Annual Review of Environment and Resources* vol. 43, no. 1 (2018): 343-368. https://doi.org/10.1146/annurev-environ-102017-030119

25 Chris Skidmore, and Will Farrell. "COP-Out? A Brief History of the United Nations Climate Change Conferences: COPs 1–26". *Harvard Kennedy School, Mossavar-Rahmani Center for Business and Government*, October 2023. https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/Final_AWP_119.pdf

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28 International Energy Agency. *Germany 2025: Energy Policy Review*. Paris: IEA, 2025. https://iea.blob.core.windows.net/assets/7fea0ad0-1cc1-45e9-810b-2d602e64642f/Germany2025.pdf

29 Karoline S. Rogge, and Phil Johnstone. "Exploring the Role of Phase-out Policies for Low-Carbon Energy Transitions: The Case of the German Energiewende." *Energy Research and Social Science,* vol.33 (2017): 128-137. https://doi.org/10.1016/j.erss.2017.10.004

30 Stephen Jarvis, Olivier Deschenes, and Akshaya Jha. "Private and External Costs of Germany's Nuclear Phase-Out." *Journal of the European Economic Association*, vol. 20, no. 3 (2022): 1311-1346.

31 Christian Hauenstein, Isabell Braunger, Alexandra Krumm, and Pao-Yu Oei. "Overcoming Political Stalemates: The German Stakeholder Commission on Phasing out Coal." *Energy Research & Social Science,* vol. 103 (2023): 1-16. https://doi.org/10.1016/j.erss.2023.103203

32 "Federal Climate Change Act (Bundes-Klimaschutzgesetz – KSG)". https://www.gesetze-im-internet.de/englisch_ksg/englisch_ksg.html

33 "Germany 2025: Energy Policy Review". https://iea.blob.core.windows.net/assets/7fea0ad0-1cc1-45e9-810b-2d602e64642f/Germany2025.pdf

Climate Action Programme 2030, a major policy package aimed at ensuring compliance with national and EU climate goals. The Programme presents concrete initiatives and measures in various industries, including energy, transportation, buildings, and agriculture, to fulfill the Act's carbon reduction targets. In parallel, the government adopted the National Hydrogen Strategy in 2020, promoting the use of low-emission hydrogen to replace fossil fuels in certain sectors and lower emissions.[34]

Given its strong domestic climate policy framework, these accomplishments enhanced Germany's reputation in UNFCCC meetings as a country that keeps its pledges. Hence, the country has played a key role in UNFCCC negotiations. As the EU's largest economy and an influential actor within the EU, Germany has continuously pushed for ambitious climate goals and shaped the Union's climate targets. The country's influence was evident during the EU's 2016 NDC submission on behalf of its member states. In this initial submission, the EU committed to reduce GHG emissions by at least 40% by 2030 compared to 1990 levels.[35] With the internal pressures from climate-ambitious member states, including Germany, the target was further revised in the updated NDC submitted in 2020. The updated NDC set a legally binding target of reducing domestic GHG emissions by at least 55% by 2030 compared to 1990 levels.[36] Hence, this evolution of climate objectives demonstrated both the influence of Germany within the EU and the EU's increasing commitments to climate neutrality.

The country's climate proactivity has also been visible on the international stage. During COP 26 in 2021, just before the 2022 energy crisis, Germany aligned itself with key international climate initiatives, including the Powering Past Coal Alliance and the Global Methane Pledge, in order to act as a pioneer in global climate diplomacy. Furthermore, at COP 26, the country took a central role in multilateral finance mechanisms. The country was a co-architect of the Just Energy Transition Partnerships (JETPs), which aim to mobilize substantial funding to support decarbonization efforts in coal-dependent economies.[37] These efforts demonstrate the country's efforts to bridge domestic ambition with international climate action.

In conclusion, Germany has a prominent position in global climate governance due to its long-standing climate engagement, which is based on both robust domestic policy and active climate diplomacy. The country established itself as a model among developed countries due to its legally enforceable climate frameworks, initiatives for reducing emissions, and financial commitments to the Global South. However, the 2022 energy crisis served as an examination of the country's dedication to combating climate change. Hence, the following section will demonstrate how Germany responded to the 2022 energy crisis.

Germany's Energy Crisis Response in 2022

The long-term availability of cheap Russian natural gas offered a reliable and lower-emission energy supply to Germany while the nation gradually moved away from coal and nuclear power. Hence, it was a major factor in Germany's clean energy transition. By 2021, Russian gas accounted for more than 55% of the country's imports. It provided reliable, adaptable, and reasonably priced baseload capacity, allowing the growth of renewable energy sources without compromising industrial competitiveness.[38] This reliance helped mask the structural challenges and created a form of dependency. Therefore, the sudden loss of this supply in 2022 exposed how crucial cheap gas had been to maintaining energy security, forcing Germany to make difficult reversals that undermined its climate credibility.[39]

34 "Germany 2025: Energy Policy Review". https://iea.blob.core.windows.net/assets/7fea0ad0-1cc1-45e9-810b-2d602e64642f/Germany2025.pdf

35 United Nations Framework Convention on Climate Change. "Intended Nationally Determined Contribution of the EU and its Member States". March 6, 2015. https://unfccc.int/sites/default/files/LV-03-06-EU%20INDC.pdf

36 United Nations Framework Convention on Climate Change. "The Update of the Nationally Determined Contribution of the European Union and its Member States". December 17, 2020. https://unfccc.int/sites/default/files/NDC/2022-06/EU_NDC_Submission_December%202020.pdf

37 Melanie Jean Murcott. "A Just COP26 Outcome for South Africa?" *Transnational Legal Theory*, vol. 13, no. 2/3 (2022): 352-365. https://doi.org/10.1080/20414005.2022.2160123

38 Natalija Katalkina and Nadezhda Bogdanova, "Russian Gas Import in the Germany Sociopolitical Discourse," *Sociopolitical Sciences* vol. 12, no. 3 (2022): 98–104, https://doi.org/10.33693/2223-0092-2022-12-3-98-104

39 Marya Khorolskaya, "New Vectors of German Energy Policy," *World Economy and International Relations* vol. 66, no. 10 (2022): 56–64, https://doi.

The 2022 energy crisis marked a turning point for Germany's climate and energy policy since it tested the country's ability to balance its long-term decarbonization goals with immediate energy security needs. Russia has used its energy resources as a geopolitical tool in a number of crises, such as the gas disputes with Ukraine in 2006, 2009, and 2014, which resulted in the interruption of gas supplies to Europe.[40] This trend peaked in 2022 when Russia's natural gas supplies significantly dropped due to the war in Ukraine, which left Germany with a serious energy security issue.

In response, the country implemented emergency measures to address the threat of energy shortages and concerns about energy security. In doing so, short-term energy security was given priority above emissions reduction goals. This resulted in the temporary reactivation of coal-fired power plants, the construction of LNG infrastructure, the postponement of nuclear power plants' phase-out, and legislative changes. These measures undermined the continuity of the German climate pathway. As a result, this brought up important questions about whether crisis-driven actions can coexist with long-term climate commitments.[41]

I. Temporary Return to Coal Power

One of the most controversial solutions of Germany in the 2022 energy crisis was the reactivation of coal-fired power reactors to make up for the significant drop in Russian natural gas exports. Under the Energy Security Act, the German Bundestag authorized a number of emergency energy laws in the middle of 2022, which legally mandate an end to coal-fired power generation by 2038. They were temporarily re-integrated into the power grid to conserve gas reserves for critical sectors such as residential heating and industrial manufacturing. Hence, by autumn, several coal plants in the country were once again generating electricity. The measure was explicitly framed by the German government as a short-term intervention.[42]

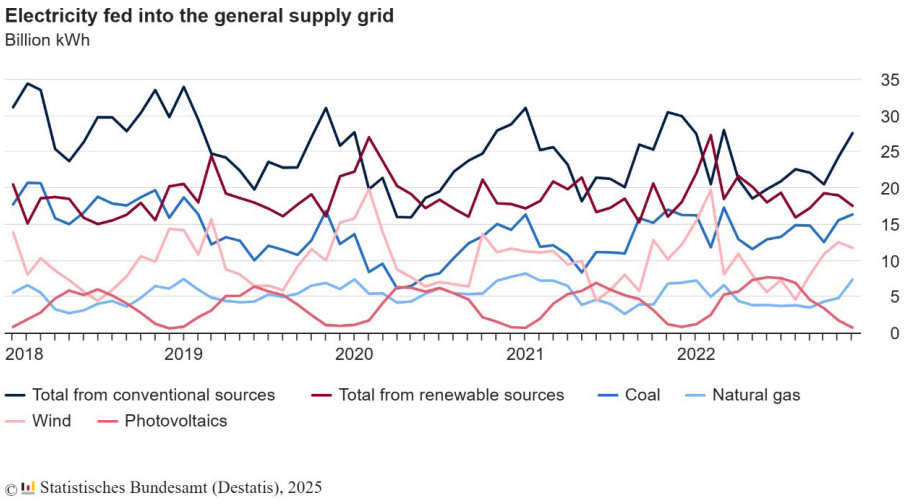

Figure 1: Electricity Production in Germany: 2018-2023. Source: Destatis (2025)

The impact of the return to coal on Germany's energy mix was immediate and measurable. According to the German Federal Statistical Office (Destatis), coal-fired electricity generation in 2022 increased by 8.4% compared to the previous year, and coal reasserted itself as the top source of electricity in 2022, contrib-

org/10.20542/0131-2227-2022-66-10-56-64

40 Eray Erbil, and Oktay Tanrısever. "Energy Regionalism in Wider Europe: Sub-Regional Energy Dynamics and the EU's Eastern Partnership". Ankara Avrupa Çalışmaları Dergisi, vol. 23, no. 1 (2024): 67-100. https://doi.org/10.32450/aacd.1387050

41 Sören Amelang, Kerstine Appunn, Carolina Kyllmann, Benjamin Wehrmann, and Julian Wettengel. "War in Ukraine: Tracking the Impacts on German Energy and Climate Policy." *Clean Energy Wire*. February 24, 2023. https://www.cleanenergywire.org/news/ukraine-war-tracking-impacts-german-energy-and-climate-policy

42 Bundesregierung. "Im Notfall: Kohle und Öl als Gasersatz." *Die Bundesregierung*. July 13, 2023. https://www.bundesregierung.de/breg-de/aktuelles/gasersatz-reserve-2048304

uting 33% of generation.[43] The return to coal reversed the declining trend of coal use and contributed to a rise in CO_2 emissions. According to the International Energy Agency (IEA), the country was the largest coal emitter in Europe in 2022, releasing 216.5 million tonnes of CO_2 out of Europe's total of 950.6 million tonnes of CO_2.[44]

II. Construction of LNG Infrastructure

To reduce dependence on Russian gas, Germany embarked on an aggressive drive to build infrastructure for importing LNG. Notably, the country had no LNG import terminals at the start of 2022, having relied on abundant pipeline gas flows from Russia, Norway, and the Netherlands. The crisis made establishing LNG import capacity as a national priority. As shown in Figure 2, the government built three floating LNG terminals (FSRUs) in record time at the Wilhelmshaven, Brunsbüttel, and Lubmin ports.[45] These facilities were essential for diversifying gas sources, strengthening energy security, and reducing vulnerability to future supply shocks.

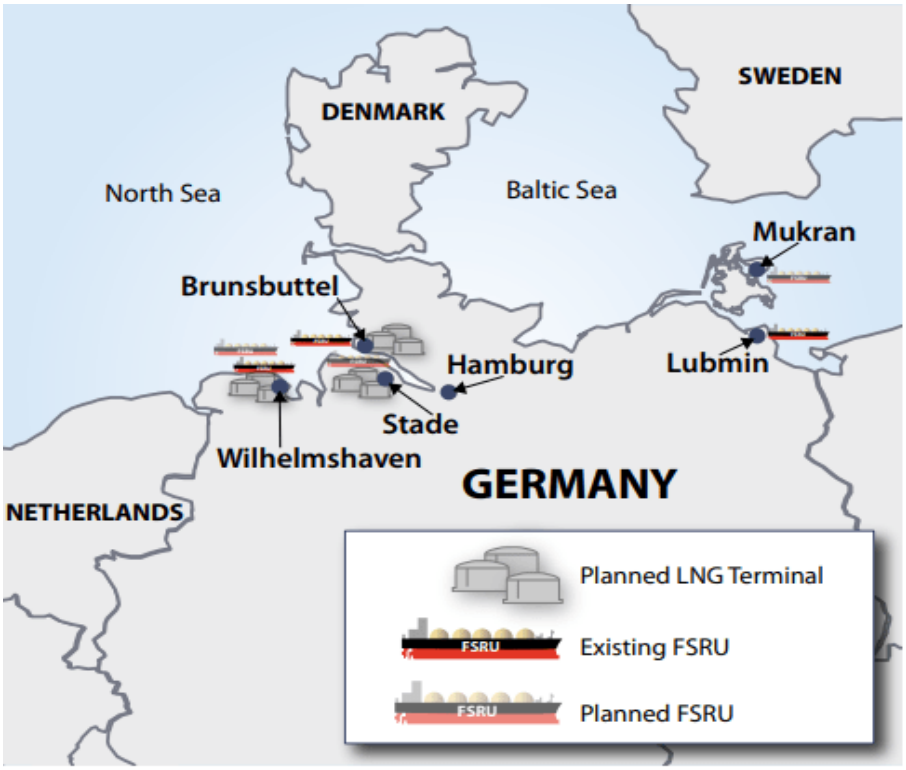

Figure 2: Existing and Planned LNG Terminals of Germany. Source: Global LNG Hub (2023).

Following the energy crisis of 2022, the country's LNG infrastructure developed rapidly, which raised serious questions regarding long-term carbon commitment and compliance with climate neutrality targets. Investments involving LNG infrastructure need considerable amounts of funding and typically operate for several decades. Although these expenditures are being presented politically as emergency measures to replace Russian gas, it threaten to embed fossil fuels more into Germany's energy grid. There is also growing concern about the LNG facilities' long-term economic feasibility since these investments can become

43 Federal Statistical Office (Destatis). "Electricity Production in 2022: Coal Accounted for a Third, Wind Power for a Quarter." Press release no. 090, March 9, 2023. https://www.destatis.de/EN/Press/2023/03/PE23_090_43312.html

44 International Energy Agency (IEA). "Germany: Coal". Accessed April 21, 2025. https://www.iea.org/countries/germany/coal

45 Per J. Agrell, Henri Dehaybe, and Manuel Herrera Rodriguez. "Balancing Supply Security and Decarbonization: Optimizing Germany's LNG Port Infrastructure under the European Green Deal" *Energy Policy,* vol.198 (2025): 1-15. https://doi.org/10.1016/j.enpol.2024.114484

stranded, and existing investments run the danger of conflicting with the EU's climate objectives in the absence of a clear phase-out strategy.[46]

III. Delayed Closure of Germany's Nuclear Power Plants

Although Germany completed its nuclear phase-out, the energy crisis caused a temporary delay in the final phase. The final three nuclear power facilities were supposed to be phased out by the end of 2022, but their operations were postponed to 2023.[47] This decision was presented by the government as a pragmatic, time-limited measure to provide additional grid stability and reduce natural gas consumption during the critical winter period. Even though postponing the nuclear phase-out proved to be a positive contribution to tackling the immediate energy challenges, it did not cease an ongoing increase in coal use.[48] This outcome underscores the complex trade-offs Germany faced between maintaining energy security and adhering to its decarbonization goals during a time of geopolitical crisis.

IV. Legislative Adjustments

Germany's Federal Climate Change Act established annual sector-specific emissions restrictions in major sectors such as transportation, buildings, industry, and energy. According to the 2019 law, the responsible federal ministry was obligated to submit and carry out a necessary corrective measure to bring emissions back into line if a sector exceeded its CO_2 quota in a given year. This compliance framework aims to ensure transparent and legally enforceable progress toward the country's overall climate objectives.[49] However, this framework was seriously challenged by the 2022 energy crisis.

With rising coal consumption and emissions over their annual limits, the government confronted the likelihood of announcing formal non-compliance for several years. In response, the law was revised in 2024, so binding sector-specific objectives were replaced by a cumulative, economy-wide framework.[50] The revised law allows for compensation between sectors, provided that Germany stays within its total national emission budget. Due to this shift, the country's framework for climate accountability was weakened, which raised questions about how long its legally binding climate commitments would last in the face of external pressure.

As a result, the crisis acted as a stress test and a catalyst, exposing the shortcomings of the current climate governance system and accelerating fundamental changes. The country's multifaceted response illustrates the complex balancing act that industrialized countries need to perform when navigating geopolitical shocks without losing sight of long-term decarbonization pathways.

Germany's Climate Diplomacy After the Crisis

Germany's credibility was shaken in the first climate summit after the crisis (COP 27) due to its domestic responses. The country's commitment to its climate goals was called into doubt by the delayed phase-out of nuclear energy and the temporary revival of coal-fired power plants. When the crisis eased in 2023, the country began taking steps to realign with its climate commitments. The country reinforced its position at COP 28 by calling for a global phase-out of fossil fuels. Also, the country was actively involved in determining international climate policy at COP 29. Hence, this section will analyze Germany's evolving stance and credibility at COP 27, COP 28, and COP 29 by assessing how crisis-driven decisions influenced its international

46 Per J. Agrell et al., 2025.
47 Dimitrios Glynos, and Hendrik Scharf, 2024.
48 Dimitrios Glynos, and Hendrik Scharf, 2024; "Electricity Production in 2022: Coal Accounted for a Third, Wind Power for a Quarter." https://www.destatis.de/EN/Press/2023/03/PE23_090_43312.html
49 "Federal Climate Change Act (Bundes-Klimaschutzgesetz – KSG)". https://www.gesetze-im-internet.de/englisch_ksg/englisch_ksg.html
50 "Federal Climate Change Act (Bundes-Klimaschutzgesetz – KSG)". https://www.gesetze-im-internet.de/englisch_ksg/englisch_ksg.html

climate diplomacy.

Germany's post-crisis diplomacy can be viewed through the lenses of international legitimacy and norm entrepreneurship. As a long-time supporter of climate ambition, Germany has traditionally served as a norm entrepreneur in the UNFCCC, supporting mitigation goals, enhancing climate finance, and fostering innovative institutions such as JETPs. However, the 2022 energy crisis posed a threat to this role. The reactivation of coal facilities and the postponement of the nuclear phase-out have raised concerns about Germany's consistency. In this context, Germany faced a twofold challenge. The country needed to preserve its position as a leader in international climate negotiations while also managing the reputational challenges stemming from its domestic policy reversals. This conflict influenced the strategic decisions it took at COPs 27, 28, and 29.

The diplomatic consequences of the country's domestic policy reversals were immediately evident at COP 27. Traditionally, a key voice in the EU's high-ambition climate bloc, Germany found its credibility questioned due to its reliance on fossil fuels in response to the energy crisis. These crisis-driven choices cast doubt on the country's reliability as a climate partner. Despite that, the country continued to participate actively in multilateral negotiations and was a supporter of climate finance at COP 27.[51]

In an effort to counter criticisms and restore its image, the country emphasized climate justice at COP 27. While some negotiators at COP 27 pointed out continuing fossil fuel use by developed countries, Germany's active role in advancing climate finance initiatives, particularly the Global Shield, reinforced its credibility. Although countries pledged €210 million to the new Global Shield initiative, Germany pledged €84 million to climate-vulnerable countries.[52] Also, Germany, together with seven European countries, contributed $70.6 million to the Least Developed Countries Fund.[53]

This strategy allowed the country to balance its urgent energy needs with a commitment to supporting vulnerable countries, thereby reinforcing its diplomatic stance in climate justice efforts. Germany's diplomatic stance at COP 27 demonstrates how countries can use financial instruments and solidarity narratives to minimize the reputational costs of short-term policy shifts. Hence, Germany sought to restore its credibility in the climate regime by presenting itself as a constructive partner.

Furthermore, Germany played a significant role in advancing climate finance outcomes at COP 28 by making significant contributions and commitments across multiple funding arrangements. As part of a broader coalition of donor countries and institutions, the country supported the establishment of the new Loss and Damage Fund. 20 countries, including Germany, made a collective pledge of $792 million and a collective contribution of $661 million.[54] In addition, Germany, alongside Denmark, Ireland, and Luxembourg, contributed to the Santiago Network, which aims to catalyze technical assistance for averting, minimizing, and addressing loss and damage, with total pledges amounting to approximately $40.7 million.[55] Furthermore, the country reaffirmed its long-standing support for vulnerable states through the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) by collectively pledging $179.06 million together with eight European countries.[56]

51 Eray Erbil. *Global Climate Change Policy: A Comparative Analysis of Climate Approaches, Strategies, Positions and Perspectives of India, South Africa, Germany, and the United States within the United Nations Framework Convention on Climate Change (UNFCCC).* PhD diss., Middle East Technical University, 2024. https://open.metu.edu.tr/handle/11511/113007

52 Federal Ministry for Economic Cooperation and Development (BMZ). "V20 and G7 Jointly Launch Global Shield against Climate Risks at COP27". November 14, 2022. https://www.bmz.de/en/news/press-releases/v20-g7-launch-global-shield-against-cllimate-risks-at-cop27-128244; Institute for Sustainable Development (IISD). "Summary of the Sharm El-Sheikh Climate Change Conference: 6-20 November 2022". *Earth Negotiations Bulletin*. November 23, 2022. https://enb.iisd.org/sites/default/files/2022-12/enb12818e_0.pdf

53 United Nations Framework Convention on Climate Change (UNFCCC). "Report of the Conference of the Parties on its twenty-seventh session, held in Sharm el-Sheikh from 6 to 20 November 2022". March 17, 2023. https://unfccc.int/event/cop-27#decisions_reports

54 United Nations Framework Convention on Climate Change (UNFCCC). "Report of the Conference of the Parties on its twenty-eighth session, held in the United Arab Emirates from 30 November to 13 December 2023". March 15, 2024. https://unfccc.int/event/cop-28#decisions_reports

55 "Report of the Conference of the Parties on its twenty-eighth session, held in the United Arab Emirates from 30 November to 13 December 2023", 2024.

56 "Report of the Conference of the Parties on its twenty-eighth session, held in the United Arab Emirates from 30 November to 13 December 2023", 2024.

Despite its financial commitments and its support for Global Stocktake commitments to triple global renewable energy capacity and double energy efficiency by 2030, the country continued to face criticism for the lack of a deadline for fossil fuel phase-out.[57] However, COP 28 marked a significant improvement in the country's stance compared to COP 27 since the country demonstrated progress in financial cooperation and aligned with the EU on fossil fuel transition.

A historic milestone at COP 28 was the collective recognition of the necessity to transition away from fossil fuels.[58] In this context, the country actively used the discourse on equity and international mitigation cooperation and emphasized the need for coordinated international action to achieve an equitable transition away from fossil fuels. Hence, these actions demonstrate Germany's continued commitment to international climate solidarity and strengthen its credibility as a responsible and constructive player in the international climate regime.

At the same time, Germany's evolving diplomacy at COP 28 reflected a broader trend, which is the shift from mitigation leadership to financial and technological leadership. Rather than relying on reducing emissions, Germany highlighted its role in international funding, capacity building, and green technology deployment. This move enabled Germany to position itself as a vital actor and reframed its climate leadership in more adaptive terms.

At COP 29, Germany sought to consolidate its post-crisis stance by assuming a prominent role in climate finance negotiations. The summit's one of the key outcomes, the agreement to triple international climate finance flows to developing countries by setting a New Collective Quantified Goal (NCQG) of $300 billion annually by 2035, reflected a growing emphasis on equity and climate finance.[59] The country pledged to contribute €6 billion annually by 2025, and it already contributed €6.4 billion in 2022.[60] This financial assistance has reinforced the country's role as a reliable partner.

Moreover, the country played a key role in establishing an agreement on climate finance by increasing its contributions and using its weight within the EU. Germany's active engagement was instrumental in the EU's framing of COP 29 as a transformative moment for climate finance, which centered on greater financial flows, equitable access, and robust adaptation support.[61] As part of this momentum, Germany, along with Denmark, Iceland, Ireland, Norway, the Republic of Korea, Spain, Sweden, Switzerland, and Belgium contributed a combined total of $132.85 million toward the Adaptation Fund's 2024 resource mobilization target of $300 million.[62]

By supporting the Hydrogen Declaration, a commitment to increase the production of low-carbon, renewable, and zero-emission hydrogen, Germany further strengthened its position as being at the forefront of the transformation of low-carbon industries at COP 29. The goal of this initiative is to increase green hydrogen production and accelerate the decarbonization of existing hydrogen production from fossil fuels.[63] Indeed, these steps were in line with the country's broader agenda of providing solutions that integrate economic resilience and decarbonization. As a result, Germany's support for the Hydrogen Declaration not only demonstrated its technological ambitions but also served as a diplomatic signal of its intention to contrib-

57 Julian Wettengel. "Germany, EU Remain Heavily Dependent on Imported Fossil Fuels" *Clean Energy Wire*. April 3, 2024. https://www.cleanenergywire.org/factsheets/germanys-dependence-imported-fossil-fuels

58 Institute for Sustainable Development (IISD). "Summary of the 2023 Dubai Climate Change Conference: 30 November – 13 December 2023". *Earth Negotiations Bulletin*. December 18, 2023. https://enb.iisd.org/sites/default/files/2023-12/enb12842e_0.pdf

59 United Nations Framework Convention on Climate Change (UNFCCC). "Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its sixth session, held in Baku from 11 to 24 November 2024". March 27, 2025. https://unfccc.int/event/cma-6#decisions_reports

60 Julian Wettengel. "Germany Says It Will Stick to International Climate Finance Commitment Despite Budget Crisis." *Clean Energy Wire*. April 25, 2024. https://www.cleanenergywire.org/news/germany-says-it-will-stick-international-climate-finance-commitment-despite-budget-crisis

61 Institute for Sustainable Development (IISD). "Summary of the 2024 Baku Climate Change Conference: 11-22 November 2024". *Earth Negotiations Bulletin*. November 26, 2024. https://enb.iisd.org/sites/default/files/2024-11/enb12865e_0.pdf

62 Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its sixth session, held in Baku from 11 to 24 November 2024", 2025.

63 COP 29 Azerbaijan. "COP29 Hydrogen Declaration." *COP 29*. Accessed April 13, 2025. https://cop29.az/en/pages/cop29-hydrogen-declaration

ute to the global industrial decarbonization agenda in the post-crisis era. However, the lack of a defined phase-out schedule for fossil fuels continued to raise concerns. These unsolved debates highlighted the gap between the country's domestic policy decisions and its advocacy on an international level, casting doubt on the long-term consistency of its climate proactivity.

In conclusion, Germany's experiences at COP 27, COP 28, and COP 29 demonstrate the challenges of climate action in a time of crisis. At COP 27, the country's credibility was undermined by the energy shock of 2022, which necessitated a reassessment of its diplomatic stance. In this context, the country mainly relied on climate finance and solidarity mechanisms to sustain influence in the face of domestic mitigation losses. With its financial commitments and support for decarbonization objectives, Germany reasserted its role as a credible actor at COP 28. By COP 29, the country noticeably restored its international reputation by actively participating in climate finance negotiations and supporting initiatives such as the Hydrogen Declaration.

Together, the last three COPs demonstrate how Germany's role in global climate governance is increasingly defined by its ability to manage the balance between short-term energy security necessities and long-term decarbonization goals. The German story serves as an example of how regular institutional contributions, international leadership, and discursive adaptability are necessary for even long-standing norm entrepreneurs to rebuild their credibility.

Germany's Performance in Pursuing Climate Diplomacy after the Energy Crisis

Germany's experiences during and after the 2022 energy crisis highlight the significant divergences between international climate obligations and national energy security necessities. As the crisis deepened, the country adopted policies that contradicted its decarbonization pathway. In addition to the effects on its emissions, the temporary reactivation of coal-fired power plants, the development of LNG infrastructure, the postponement of nuclear phase-out, and legislative changes caused a loss of credibility on an international scale. This is because developing countries frequently perceive developed countries' behavior as an indicator of collective ambition and justice.

Germany's actions raised concerns that developed countries with strong legal frameworks and political will on climate action can be insensitive to climate change. This observation reflects broader concerns in the literature about the credibility gap in climate governance, since the perceived alignment between discourse and action is central to international credibility.[64] In this regard, the country's deviation from its mitigation trajectory reinforced the perception that developed countries may not uphold their commitments when faced with crises, thereby weakening the legitimacy of multilateral climate efforts.

The concerns about climate finance, the need to phase out fossil fuels, and the lack of trust between developed and developing states were the key topics at COP 27 and beyond. During the energy crisis, Germany's shift to coal was considered as a violation of climate justice principles rather than merely a national reaction.[65] The apparent double standard was the focus of the criticism since developed countries urged developing states to reduce their use of fossil fuels while making exceptions for themselves in the instance of crisis. This conflict highlights a basic problem with the climate regime that its moral legitimacy depends on the consistency of its strongest members.

Germany's temporary deviation not only signaled institutional fragility but also triggered broader debates on climate equity. Hence, these reactions underscore the importance of credibility as a strategic asset in international climate diplomacy. Also, this is consistent with the findings of Hägele et al., who argue that the revival of fossil fuels by developed countries undermines climate justice and erodes trust among developing

64 Karin Bäckstrand, and Jonathan W. Kuyper, 2017.

65 Henner Busch, Vasna Ramasar, Sofia Avila, Brototi Roy, Tara van Ryneveld, Ana Mandinic, Eric Brandstedt. "Mining Coal While Digging for Justice: Investigating Justice Claims Against A Coal-Phase Out in Five Countries". *The Extractive Industries and Society*, vol. 15 (2023): 1-11. https://doi.org/10.1016/j.exis.2023.101275

states.[66] Therefore, these measures were perceived not only as short-term policy reversals but as symbolic violations of the equity principles.

The concept of norm entrepreneurship is useful in understanding Germany's climate diplomacy after the crisis. Germany has long positioned itself as a champion of financial solidarity, transparency, and mitigation efforts in the international climate regime. However, its performance after 2022 shows a shift from norm creation to norm restoration and adaptive credibility management. This strategic recalibration is seen in Germany's increased emphasis on climate finance contributions and active engagement in institutional decisions at COP meetings. Therefore, these initiatives are part of a larger compensatory leadership approach in which nations respond to credibility losses by strengthening other pillars of legitimacy with financial and technical cooperation.

At the same time, Germany's post-crisis diplomacy at the UNFCCC demonstrates how climate finance and international solidarity can be used as instruments to sustain international influence. The country was able to recover much of its diplomatic credibility at COP 28 and COP 29 through its consistent commitments and contributions to climate finance. This strategy was effective in maintaining a visible and influential presence within the UNFCCC, while mitigation credibility remained questioned. Although politically framed as short-term action for energy security, continuing reliance on fossil fuels raises long-term concerns about carbon lock-in and stranded assets in light of the 2045 climate neutrality target. This raises doubts about the resilience of climate governance structures.[67] In the end, such compensatory strategies can help restore reputation, but it does not fully resolve questions about mitigation sincerity.

Germany's climate diplomacy also evolved by shifting emphasis from emission-based leadership to structural leadership. The country continually used its leverage to influence agenda-setting, financing mechanisms, and technological directions. Its support for the Global Shield against climate risks, the Santiago Network, and the Hydrogen Declaration are examples of how Germany sought to restructure its leadership not just in terms of emissions reductions but also in building institutional and financial capacity globally. These diplomatic instruments served a dual purpose, which was restoring Germany's role as a trustworthy partner and demonstrating how developed countries can support just transitions even during times of geopolitical strain.

Moreover, Germany's increased contributions to the NCQG on climate finance and its leadership within EU delegations helped reposition the country as a proactive player. The diplomatic success of COP 29, particularly on adaptation finance and technology partnerships, owes in part to Germany's efforts in coalition-building and consensus facilitation. This marks a strategic use of diplomacy where financial commitment is translated into soft power and norm advocacy. Therefore, these actions illustrate how states with reputational damage can recover their international standing without necessarily returning to pre-crisis policy settings.

Furthermore, Germany's revision of its Federal Climate Change Act shows how external pressure can compromise the application of the law. Although politically necessary, short-term deviations compromise the institutional consistency needed for successful long-term climate governance. This is particularly challenging for a country like Germany, which has been a global model for climate action. A dual-track reality is highlighted by the contrast between short-term deviations and long-term targets. Hence, ambitious climate action requires negotiating trade-offs between short-term demands and long-term goals, which are likely to impact other developed countries dealing with unstable geopolitics.

Scholars such as Karin Bäckstrand and Jonathan W. Kuyper have argued that climate legislation is only as strong as the political will that backs its enforcement. The amendment of the Federal Climate Change Act

66 Hägele et al., 2022.

67 Andrew Jordan, Dave Huitema, Harro van Asselt, and Johanna Forster. *Governing Climate Change: Polycentricity in Action?* Cambridge: Cambridge University Press, 2018.

illustrates how legislative frameworks, while appearing robust on paper, can be weakened when confronted with geopolitical or economic shocks. This supports the view that binding climate laws must be designed with built-in flexibility mechanisms that do not fully abandon long-term decarbonization pathways.[68] In addition, this case reflects the broader challenge described by Haas et al., who note that coalitions of climate policy stakeholders are often tested when sectoral priorities collide during crises.[69] The German example shows how domestic politics, industry pressure, and social concerns about energy affordability can quickly override climate objectives, even under a legally binding framework. Hence, such findings suggest that future climate legislations may need clearer procedures for crisis management to preserve institutional trust and predictability.

Finally, the German experience highlights what Jonathan Kuyper, Heike Schroeder, and Björn-Ola Linnér describe as the limits of a system built on non-coercive compliance. The UNFCCC framework depends on reputational and normative incentives, rather than hard enforcement.[70] Germany's crisis-induced revisions to its climate law thus reveal how voluntary international norms struggle to constrain national interest calculations in moments of acute vulnerability. This reinforces the necessity for stronger monitoring, reporting, and verification systems that can provide early warnings of backsliding before credibility damage escalates.

Furthermore, Germany's approach offers a case study of how countries can combine credibility restoration with strategic agenda-setting in the international arena. The country was able to advance climate finance and technological cooperation while regaining its credibility by promoting its initiatives within the framework of an equitable transition. This aligns with the perspective of Robert O. Keohane and David G. Victor on regime complexes, which shows that countries can recover influence by navigating multiple overlapping arenas of negotiation.[71]

Overall, these observations suggest that Germany's experience is highly relevant to other developed countries whose climate leadership can be threatened by geopolitical challenges. A more systemic lesson emerges from the German experience. Effective climate diplomacy requires integrating flexible policy design and transparent crisis communication. In addition, ongoing institutional participation is essential to safeguard the reputation. These strategies go beyond short-term damage control and offer durable pathways for maintaining climate cooperation under pressure.

In summary, Germany's post-2022 actions show a form of adaptive engagement that is imperfect but influential. The country's ability to recover its international credibility through financial engagement and multilateral diplomacy shows that the country's engagement in the climate regime is dynamic. It can be rebuilt, even after significant reversals. In an era of instability, the German case can serve as both a warning and a strategic model for climate diplomacy as other developed countries face similar obstacles. The case also calls for a larger discussion on the flexibility of international climate norms and the mechanisms available for credibility restoration. The main point is that effective climate leadership involves not only ambition and action but also adaptability, reactivity, and the capacity to bridge credibility gaps that arise during crises.

Conclusion

Germany's approach to the 2022 energy crisis is a key instance for understanding the convergence of energy security and climate responsibilities during times of geopolitical turbulence. The country was a widely recognized climate pioneer for many years. However, the country diverged from its pre-established decarbonization objectives with the temporary reactivation of coal facilities, the development of LNG infrastruc-

68 Karin Bäckstrand, and Jonathan W. Kuyper, 2017.
69 Haas et al., 2022.
70 Jonathan Kuyper, Heike Schroeder, and Björn-Ola Linnér, 2018.
71 Robert O. Keohane and David G. Victor, 2011.

ture, the postponement of nuclear power plants' phase-out, and legislative changes. These measures have a significant impact on the country's credibility in international climate negotiations, despite their intended purpose of mitigating energy supply shocks.

This article examined Germany's management of credibility challenges within the UNFCCC by reviewing its activities at COP 27, COP 28, and COP 29. To assess the country's response to the crisis, the research employed a framework built on three conceptual lenses: credibility, norm entrepreneurship, and adaptive diplomacy. The concept of credibility proved central in this research since Germany's temporary return to fossil fuels undermined the alignment between its domestic actions and international climate commitments. To rebuild its international standing, the country adopted several compensatory strategies. These include increasing climate finance, voicing support for just transitions, and aligning its policies with the EU's broader mitigation targets.

Germany is a norm entrepreneur that has influenced global climate norms by promoting proactive mitigation, renewable energy, and climate finance initiatives. However, crisis-driven reversals put these roles to the test. To maintain its normative relevance, the country concentrated on climate funding and solidarity-based diplomacy. The idea of adaptive diplomacy also explained how Germany enhanced its multilateral stance in reaction to domestic limitations, enabling the country to continue playing an active role in global climate negotiations.

As this article has shown, the country's long-term climate obligations clashed with the domestic need for energy resilience during the crisis. The resulting policy reversals not only put pressure on Germany's legal climate framework but also undermined the country's standing as a credible and responsible participant in global climate governance. Germany was under diplomatic pressure at COP 27, so it relied mostly on pledges of climate finance and language of solidarity to continue being influential. By COP 28 and COP 29, the country made significant progress in restoring its reputation by strengthening its financial pledges and contributions, endorsing the terminology of the fossil fuel transition, and taking part in technology declarations like the Hydrogen Declaration.

Several policy proposals are derived from these observations. First, long-term climate policies should include flexibility mechanisms that allow countries to deal with short-term challenges while maintaining their credibility. Secondly, countries need to use transparent communication approaches to explain corrective solutions and temporary deviations. Third, engagement in climate diplomacy should reflect multiple dimensions, with technical and financial contributions supporting mitigation efforts. Lastly, the UNFCCC has to formalize procedures for restoring credibility so that countries can regain legitimacy and confidence after unavoidable policy reversals.

This study also has several limitations. It is based on qualitative document analysis and relies primarily on publicly available policy documents and secondary academic literature. Hence, it does not include interview data with negotiators or policymakers, nor does it offer a comparative analysis with other developed countries affected by energy shocks. Future studies might build on this research by examining how developing states perceive the legitimacy of such actions of developed countries. In addition, comparative studies can explore how different countries attempt to restore credibility in climate diplomacy. Furthermore, a more thorough investigation of the domestic political factors influencing Germany's crisis response might enhance knowledge of the interaction between domestic constraints and external commitments.

In summary, this article contributes to the body of literature by showing how crisis-driven policy reversals during the 2022 energy crisis severely undermined Germany's international image. The research demonstrates that increased financial diplomacy and adaptive participation in global climate negotiations contributed to substantially restoring its negative image. Despite challenges, these actions assisted Germany

in maintaining a certain level of legitimacy. In times of geopolitical uncertainty, the findings highlight the growing significance of credibility, norm promotion, and institutional adaptability in maintaining influence in global climate governance.

Ethical Statement | Etik Beyan

It is declared that scientific and ethical principles were followed during the preparation of this study and that all sources used have been properly cited in the references.

Bu çalışmanın hazırlanma sürecinde bilimsel ve etik ilkelere uyulmuş; yararlanılan tüm kaynaklar kaynakçada belirtilmiştir.

Artificial Intelligence Use | Yapay Zekâ Kullanımı

No artificial intelligence-based tools or applications were used during the preparation of this study. The entire content of the study was produced by the authors in accordance with scientific research methods and academic ethical principles.

Bu çalışmanın hazırlanma sürecinde yapay zekâ tabanlı herhangi bir araç veya uygulama kullanılmamıştır. Çalışmanın tüm içeriği, yazarlar tarafından bilimsel araştırma yöntemleri ve akademik etik ilkelere uygun şekilde üretilmiştir.

Author Contribution Statement | Yazarların Katkı Oranı Beyanı

The contributions to this article are as follows: Eray ERBİL 70%; Oktay F. TANRISEVER 30%. The authors agree on these contribution ratios.

Yazarların makaleye katkıları şu şekildedir: Eray ERBİL %70; Oktay F. TANRISEVER %30. Yazarlar bu katkı oranları konusunda hemfikirdir.

Disclosure Statement | Çatışma Beyanı

The authors declare that there is no conflict of interest regarding this study.

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