A historical turning point? Early evidence on how the Russia-Ukraine war changes public support for clean energy policies

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Anthony Patt[1], Bjarne Steffen[2]

Abstract:

Given the importance of oil and gas from Russia for many European countries, the invasion of Ukraine by Russian forces in 2022 could be a turning point for energy policy in Europe. A framing in line with the clean-energy transition, however, is not a given. Here, we present early evidence on how the war has changed public policy support for policies aiming at the phase-out of fossil fuels, and for policies supporting the phase-in of clean energy alternatives. Using a population survey in Switzerland, we evaluated the changing support for different policy proposals with varying information treatments. Overall, we find strong support for clean energy policies across much of the political spectrum. Nevertheless, an interpretation of the war's ramifications in line with strengthened climate policy is by no means a given, and public support needs to be translated into policy action.

Keywords: Climate policy, fossil fuel phase-out, policy acceptance, public opinion, renewable energy, sustainable finance

[1] Department of Environmental Systems Science, ETH Zurich, Switzerland
[2] Department of Humanities, Social and Political Sciences, ETH Zurich, Switzerland; Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology, United States. **Corresponding author:** bjarne.steffen@gess.ethz.ch

1 Introduction

The transition to a net-zero energy system by or before 2050 has become a goal of many countries (Day et al., 2020; Meinshausen et al., 2022). It is clear that achieving such transformative change will require sustained investment in low-carbon energy sources, such as renewable energy technologies, over the intervening decades, as well as the phase-out of fossil energy (Geels et al., 2017). Yet public policies to accelerate this change need to be enacted by policymakers. Policymakers, in turn, pay attention to public support (Breetz et al., 2018; Schaffer et al., 2022).

Political scientists have long noted that shocks and crises are important drivers of political processes. One of the most applied theories explaining when and why particular policies change is the "multiple streams" theory, which suggests that policy change occurs when the perceptions of problems, solutions, and politics align around particular legislation (Kingdon, 1995). A key element in this model of policy-making is the so-called "focusing event," some high-profile event taking place that grabs people's attention, and causes them to focus on a particular facet of a particular problem. If, at that moment, there are solutions that have been analyzed and shown to solve a particular solution, and the politics of these solutions are favorable, then it is likely that a policy change will occur, solving the problem as it is perceived to be. Focusing events can also influence politics: providing public support for one of the sides in a political debate, allowing it to gain a majority of political votes (Sabatier, 1988). If, on the other hand, there is a poor fit between the problem and the solution, or the politics are not favorable, then no change will take place, and over time, the problem will fall from its position of importance. Hence, these shocks can create a "window of opportunity" for policymakers to address a problem that may have existed for some time, and yet was never quite important enough to rise to the top of the policymakers' agenda.

Critically, however, focusing events can often be interpreted in different ways, which in turn influences whether the politics and solutions streams can align around a particular problem. For example, the September 11th, 2001 attack on the World Trade Center and Pentagon in the United States could have formed the basis for policy-making to solve a number of different problems: terrorism with roots in Afghanistan; terrorism with roots in Saudi Arabia; or political turmoil in the Middle East tightly coupled with fossil fuel exports. As Entman (2003) documents, there were political actors attempting to frame the attacks in each of these ways, but ultimately, the Afghanistan terrorism frame prevailed, supporting policy-making in the form of a United States intervention to topple the Taliban government.

On February 24th, 2022, after months of preparation and speculation, Russian forces invaded the country of Ukraine. The war soon caused thousands of deaths and wounded, and let millions of people flee their home. The Russian attack was widely condemned in the West, including by nearly every European government, and met with military, humanitarian, and financial support for the Ukrainian government, as well as economic and social sanctions against Russia and many of its elites. Within days of the attack, the German government announced that it was suspending the final permitting process for the Northstream 2 natural gas pipeline due to begin shipping natural gas from Russia to Germany under the Baltic, circumventing an existing pipeline passing through Ukraine. More generally, policymakers in Europe began to focus on three related problems. First, it was seen as a problem that many countries' energy systems depended on fossil fuel imports from Russia for their day-to-day functioning. Russia could, at any time, block the flow of energy in order to retaliate to the economic and social sanctions. Indeed, Russia did, weeks later, cease deliveries of natural gas to Poland and Finland. Second, the payments for these fossil fuel imports were seen as a problem in their own right, since they accounted for the largest single revenue stream flowing to the Russian government, and hence an enabler of the Russian military. This fact

prompted calls for European countries to further hurt Russia, ending these imports and the associated payments themselves. Third, the price of fossil fuels rose dramatically after the onset of the war, exacerbating the issue of inflation already evident. Each of these three problems, in turn, could be framed in a number of ways: reliance on fossil fuels; reliance on energy imports; reliance on energy imports from a single country; reliance on imports from non-democratic countries; and cost-ineffective energy systems. Solutions began to appear in the media for each of these perceived problems, including renewable energy development within Europe, constructing liquefied natural gas (LNG) terminals to access natural gas from Qatar or the United States, measures to reduce reliance across the economy on imports from non-democratic countries, including China, and tax reductions for fossil fuels.

There is reason to believe, then, that the war in Ukraine has led to a window of opportunity for new climate and energy policies in Europe centering on the accelerated deployment of renewable energy technologies, and on the accelerated phase-out of fossil energy use. These changes would most clearly respond to the perceived vulnerability to energy imports from Russia. However, one potential reason to believe that support for these policies could fall is if they were perceived as leading to higher energy prices, exacerbating this perceived problem. That the war could have led to rising support for several other sets of policies related to energy is somewhat less obvious. One such issue, relevant for a number of European countries, is the regulation of the financial sector, and whether global investments originating in a given country ought to be oriented towards sustainability. A second issue is the support for the use of new natural gas-fired peak power stations. In the authors' home country of Switzerland, the construction of several of these had recently been proposed as a means to provide flexibility to the power system, and thus to accelerate the phase-out of fossil fuels. While the war likely highlighted the need to accelerate the phase-out of fossil fuels, it is unclear whether a solution involving natural gas use would be viewed favorably. Finally, a third issue is support for greater European energy sector integration, or rather for enhanced national autonomy or even autarchy. In Switzerland, many experts have suggested that enhanced European power-market integration would facilitate the transition to renewable energy by allowing the country to seasonally balance its large hydropower generating fleet, as well as its planned additions of solar photovoltaic (PV), with winter imports of wind energy. At the same time, however, there have been calls for Switzerland to enhance its energy security by ending all reliance on imported energy. One could imagine the war in Ukraine supporting both sets of arguments.

Here, we present the results of a survey administered in April 2022 to a sample of 1,000 Swiss voters in the French- and German-speaking regions of the country. Switzerland is an interesting country to study for several reasons. First, it is fairly typical of European countries in terms of being dependent on Russian imports for the energy sector, and having witnessed an increase in energy prices. Second, it is a country with a large financial sector (including for fossil fuel trade) that has hardly been addressed by green financial policies to date (Steffen, 2021), and hence a good country to investigate whether attitudes towards greening the financial sector may have changed. Third, Switzerland is a country where issues of energy trade are of high political salience, given that Switzerland is not a member of the European Union (EU), and is facing a potential energy shortfall due to future EU policies that would restrict transmission capacity to Switzerland. Finally, Switzerland is a country where large policy issues are often resolved through popular referenda. Indeed, the government's most recent climate policy package was rejected by 51% of voters in a June 2021 referendum. We asked respondents for their level of support for 10 possible climate and energy policy measures, as well as their self-assessment of whether their support had risen or fallen as a result of the war in Ukraine. We also asked respondents a number of questions related to socio-economic factors, and their preferred political party.

2 Climate and energy policy in Switzerland

Swiss climate and energy policies have generated a great deal of coverage in the media, in part because they have come up frequently in referenda in recent years. In the Swiss political system, the two houses of parliament need to pass a unified new law, but these do not enter into effect immediately. With more than 50,000 signatories gathered within several months of any law's passage, any group (including political parties) can bring the law to a popular vote, which typically occurs within one year.

Swiss climate and energy law has been divided into two policy-making streams, one focused primarily on energy, and electricity generation and use in particular, while the other focuses on climate change and emissions more generally[3]. In part, this follows from the fact that the Swiss power sector is already largely decarbonized, with roughly 65% of power generated through hydroelectric dams, and roughly 30% from a fleet of nuclear power plants. The 2011 nuclear accident in Fukushima, Japan, triggered a reevaluation of the national energy system with calls to decommission the nuclear power fleet. In 2016, the parliament passed a national energy policy package, with a mix of instruments designed to gradually phase out the country's nuclear power fleet as individual plants reached the end of operational life, and to replace these with support for wind and solar power, as well as energy efficiency measures. The right-wing populist party (Swiss People's Party) challenged the law, bringing it to a referendum in 2017; the challenge failed, as 58.2% of voters approved the law.

On the climate side, a policy package had been put in place in 2000 to achieve the First Commitment Period targets (2008–12) in the Kyoto Protocol, which was then revised in 2013 in order to achieve the Second Commitment Period targets (2020). In 2020, the Swiss parliament passed a revised version of the law intended to achieve the emissions reduction targets promised for 2030 in the country's Nationally Determined Contribution under the Paris Agreement. The revised law contained a mix of instruments, including technology support, carbon prices, and regulatory measures. Again, the Swiss People's Party challenged the law, and in June 2021 prevailed in their challenge, with 51.6% of voters rejecting the law.

Following this defeat, the government developed a new proposal for the revised climate law, omitting any additional use of carbon prices, which had been viewed as largely leading to the law's rejection by voters. A parliamentary debate on the new proposal is scheduled for the summer of 2022. The Swiss People's Party has already announced that they are likely to challenge the law if it closely resembles the proposal set forth by the government.

Meanwhile, there have also been extensive discussions focusing on Swiss climate targets for 2050. In 2019, a coalition of climate policy advocates launched a signature drive for a national vote on setting a net zero emissions target and a ban on the use of fossil fuels for 2050, eventually collecting the needed 100,000 signatures. This triggered a set of counter-proposals from the government, which, if passed, would avert the popular vote. The most recent of these quite closely mirrors the text of the popular initiative, in terms of setting a net zero target for 2050, and a near complete phase-out of fossil energy. It is also scheduled for parliamentary debate in the summer of 2022.

[3] For more details, see e.g. (Kammerer et al., 2020; Rinscheid and Udris, 2022).

3 Survey method

To explore the possible effects of the war in Ukraine on support for Swiss climate and energy law, we developed a survey that was administered in late April 2022, i.e. two months into the war. We sampled 600 respondents in the German-speaking part of the country, and 400 respondents in the French-speaking part, making use of the database of an established marketing survey company.

Five of the questions focused directly on issues associated with fossil fuel use and reflect the current policy debates: (1) economy-wide phase-out of fossil fuels by 2050; (2) the use of natural gas as a means to ensure adequate winter power supply; (3) a prohibition on future installations of fossil heating systems; (4) a prohibition on sales of cars with internal combustion engines to take effect in 2030; and (5) regulations on the financial industry aimed at reducing new investments in the fossil energy industry. Five further questions focused on issues associated with renewable energy support: (6) government support for solar and wind power to enable the economy-wide phaseout of fossil fuels; (7) coordination of the Swiss and European power markets, in order to enable improved integration of imbalanced solar, wind, and hydropower resources in Switzerland; (8) policy changes to enable ground-mounted solar photovoltaics installations, currently prohibited in most cases under Swiss law; (9) streamlining of the permitting processes for wind turbine installations; and (10) government support for novel deep-decarbonization technologies, such as carbon-neutral synthetic aviation fuels.

For each of these ten questions, we asked two questions: level of support using a five-point Likert scale; and, the respondent's own assessment about whether their support had risen, fallen, or remain unchanged as a result of the war in Ukraine. We explored the degree to which attitudes toward each of these issues would be sensitive to background scientific information. For this, we distributed multiple versions of the survey, such that for each question, there was a control group receiving no additional scientific information, and an equally numbered treatment group receiving a paragraph of information, derived from the scientific literature, on each issue.

Finally, we asked a number of questions related to demographic factors (age, income, and educational attainment), as well as potential covariates. The latter included whether respondents: lived in the city, suburbs, or countryside; owned or rented their primary residence; heated the residence with fossil fuel; owned or leased a car with an internal combustion engine; and political preferences. For the latter, the options were the six main political parties in Switzerland. As they are frequently aligned from left to right, these are the Greens, the Social Democrats, the Green Liberals (which are seen as more market oriented than the Greens), the Centrists (a recent fusion of Christian Democrat and Conservative parties), the Liberal Democrats, and the right-wing Populist party.

Clearly, the survey method has some limitations. Particularly, by simply asking whether support changed as a result of the war, we cannot exactly measure how large the change in support has been, and respondents could overestimate the change. An alternative way to measure changes would be a panel analysis (e.g., in the context of the Swiss Environmental Panel (Quoss et al., 2021)), though panel analyses cannot deliver the early insights that could inform the rapidly evolving debate concerning fast changes to energy policies. Further, past research emphasized that public acceptance of policies typically does not consider individual policy instruments in isolation but is formed in relation to a broader climate and energy policy mix (Ingold et al., 2019). While this study surveys the support for policies one by one, we therefore mostly refrained from specifying specific policy instruments, but rather refer to policy goals that could be achieved by various specific instruments or combinations thereof.

4 Empirical results

For each of the 10 main questions, we display a set of graphs showing overall levels of support, the effects of the information treatment, and support levels contingent on political preferences. We also show self-reported changes in levels of support, and these net changes contingent on political preferences.

4.1 Support for fossil fuel–related policies

Figure 1 shows support for the economy-wide phase-out of fossil fuels. There is strong support for this in all parties except for the populist party; even among the latter, the opposition is less than 50%. Generally, people were more likely to say that their support had risen (almost a third of respondents), rather than fallen, as a result of the war. In this case, there was a significant difference ($p < 0.05$) between French and German survey respondents, the latter showing a greater tendency towards increasing support following the beginning of the war in Ukraine. No other significant correlations or effects were observed.

Figure 2 shows support for building new natural gas-fired power plants. Feelings are mixed on this issue, with little differentiation across party lines; among the supporters of no party do either support or opposition exceed 50%. Changes in support levels since the war are generally less than for the other policies investigated, and indeed, among Greens and Green Liberals, completely absent.

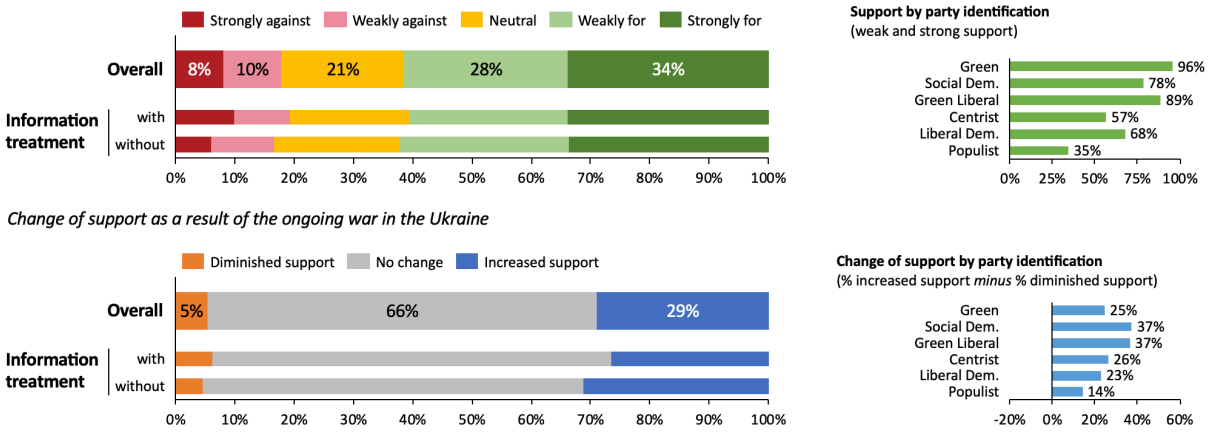

Figure 1: Support for a policy to completely end the use of fossil fuels (oil and natural gas) in Switzerland by 2050

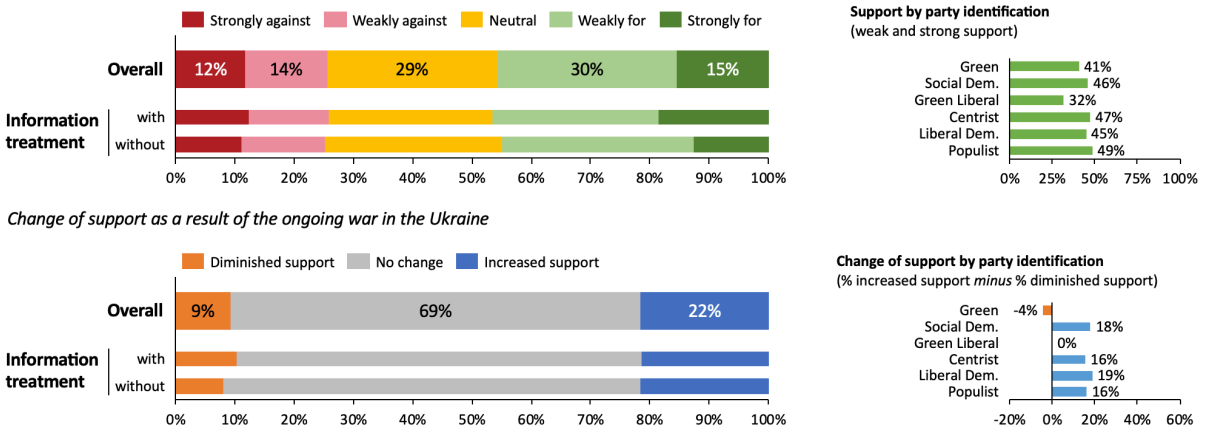

Figure 2: Support for a policy to build a set of natural gas power plants in Switzerland to cover potential power shortfalls in winter months

Figure 3 shows support for the prohibition of new fossil heating systems. There is generally high support for this measure, strongest in the left parties, and weakest in the Populist party. Somewhat surprisingly, neither home ownership nor current use of a fossil heating system had a statistically significant influence on support levels. Also, no other significant demographic effects were observed. Support levels rose the most in the social democratic party, perhaps reflecting lower levels of support prior to the war, and hence a greater opportunity for movement.

Figure 4 shows support for a prohibition on the sale of new internal combustion engine cars. Support is highly contingent on party identification. The data also showed significantly lower levels of support ($p < 0.05$) for rural residents compared to either urban or suburban residents, as well as higher levels of support among those who did not own an internal combustion engine car. Changes in support levels as a result of the war are modest compared to changes on other policies.

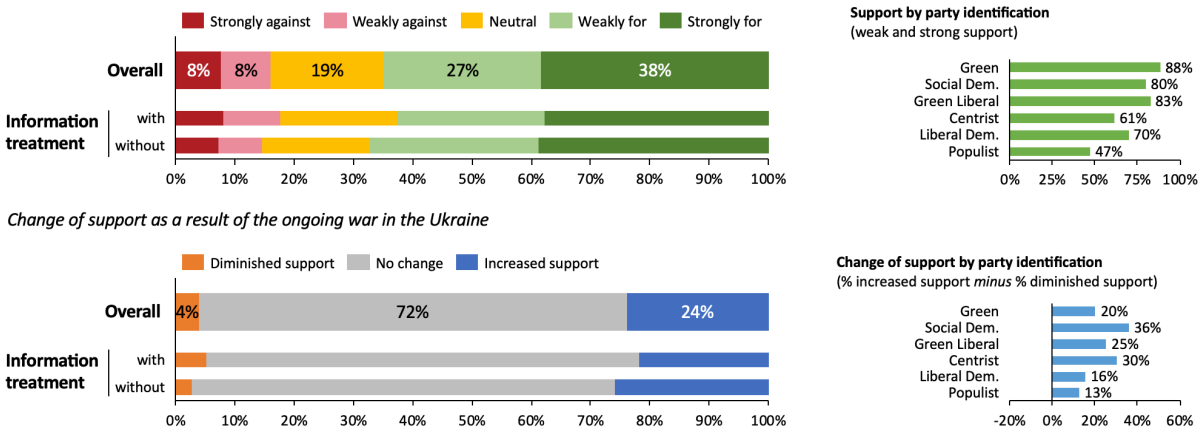

Figure 3: Support for Swiss-wide policy prohibiting the installation of new oil and natural gas heating systems for buildings, in combination with government support to ensure that the switch to alternative heating systems – such as heat pumps – would be affordable to low-income families, taking effect by 2025.

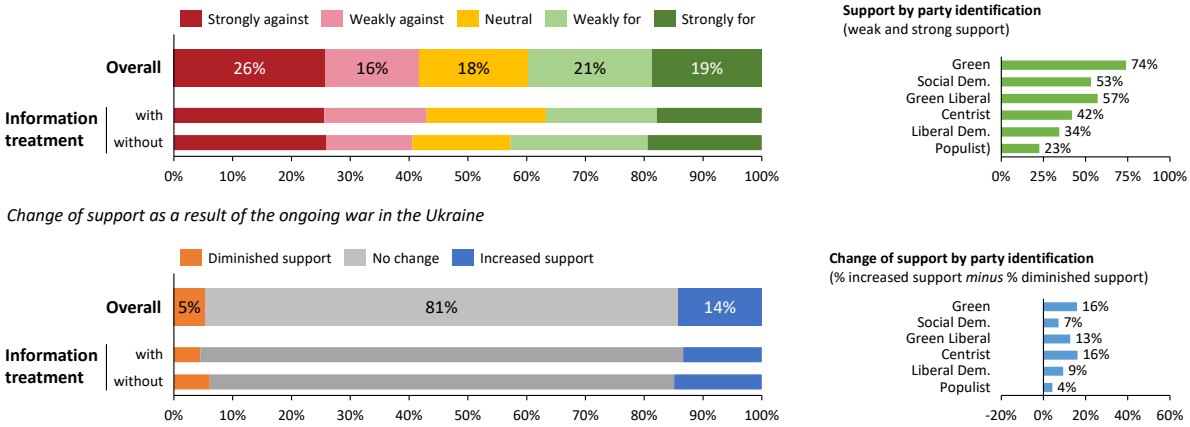

Figure 4: Support for a policy prohibiting the purchase of new cars that burn gasoline or diesel in combination with government support for the installation of electric-vehicle charging stations, taking effect by or before 2030

Figure 5 shows support for a policy aimed at reducing fossil energy finance. There is very high support for this in the left parties, and more mixed support in the right parties. No other significant effects were observed. Support has risen as a result of the war fairly consistently across parties, with the exception of the Populist party.

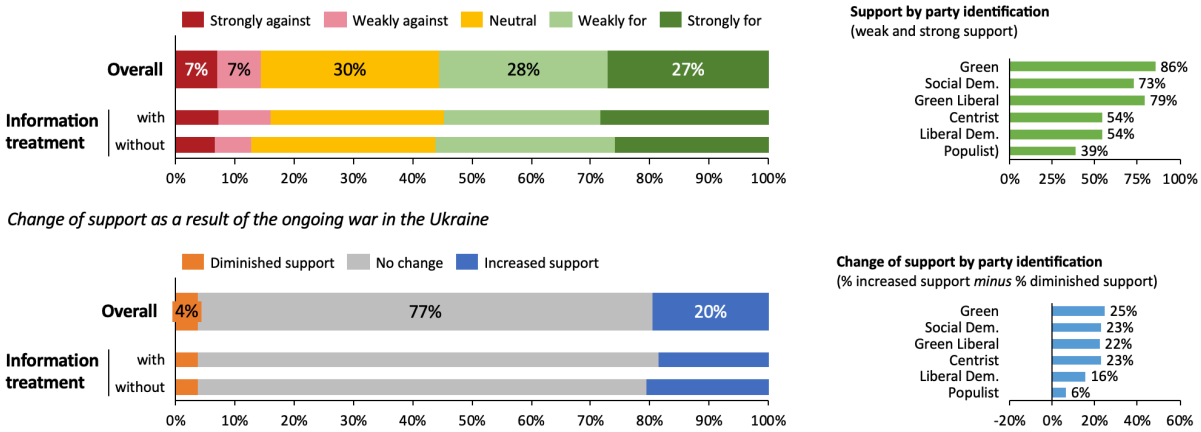

Figure 5: Support for financial policies that encourages Swiss banks, asset managers, and financial traders to reduce investment in fossil fuels

4.2 Support for clean-energy-related policies

Figure 6, showing support for policies aimed at expanding solar and wind energy production, highlights that such policies enjoy the highest levels of support, consistent across all political parties, of any of the policies. No other significant effects were observed. It also showed the greatest tendencies toward increased levels of support since the war, with a bit less than a third of respondents increasing their support.

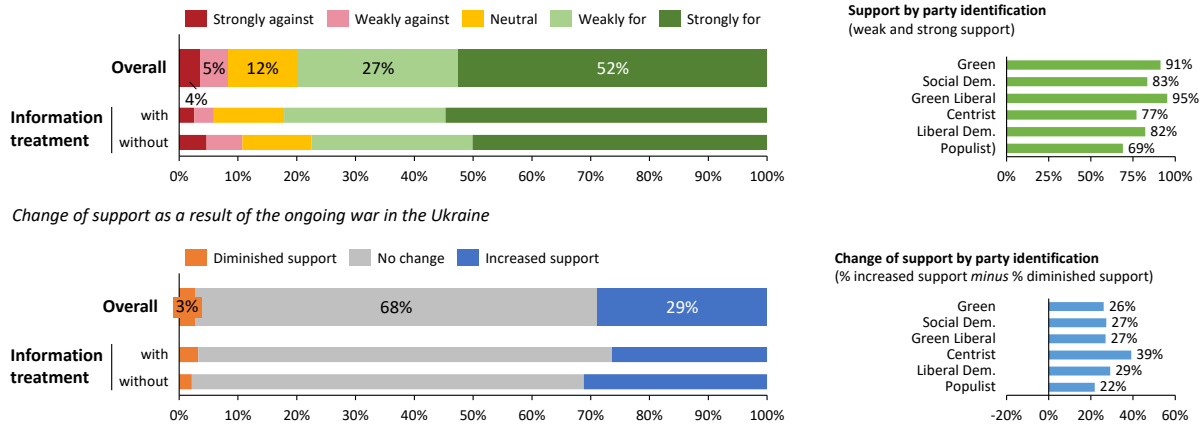

Figure 6: Support for policies to accelerate the deployment of solar and wind power in Switzerland to the extent needed to replace oil and natural gas

Figure 7 shows support for the integration of the Swiss power system with the European one. Support levels are high in all parties, and also show a free-market effect, in terms of the Green Liberals showing higher support than the Greens, and the Liberal Democrats showing higher levels of support than the centrists. Only the Populist party,

which is also anti-EU, shows less than majority support. Support has risen very consistently among all parties, with the exception of the Populist party.

Figure 8 shows the support for ground-mounted solar installations to be high. Switzerland is one of the few countries where freestanding solar photovoltaics are rare (also due to a moratorium for such projects), and yet it appears that the war has increased the political appetite for these, relatively consistently across all political parties.

Figure 9 shows support for streamlining the permitting processes for wind also to be high. In Switzerland, as of now, a set of permitting legal processes run in sequence, leading to administrative planning phases that take up to a decade (Broughel and Wüstenhagen, 2022). One current proposal is to have them run in parallel, meaning that the same arguments would be heard, but the entire process would take less time, likely improving the financial prospects for wind park developers.

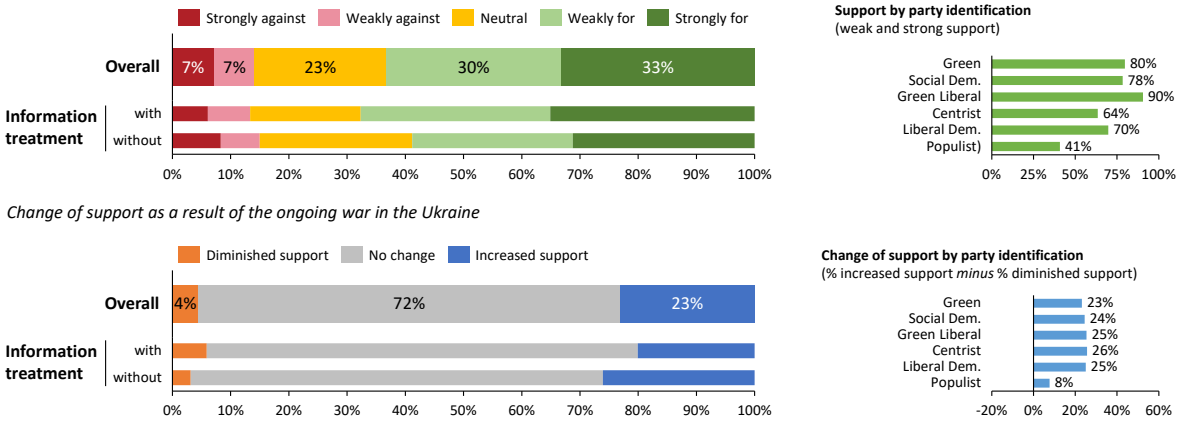

Figure 7: Support for close integration of Switzerland into EU electricity regulation in order to allow electricity trading between Switzerland and the rest of Europe and a pooling of hydro-power, solar PV, and wind power resources across countries

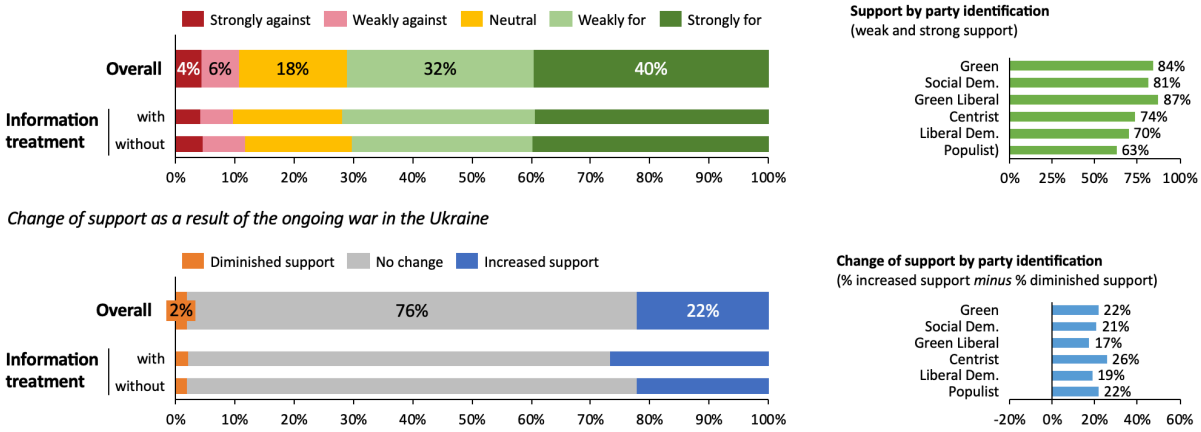

Figure 8: Support for a policy to allow for the installation of some ground-mounted PV in Switzerland, contingent on an environmental impact analysis

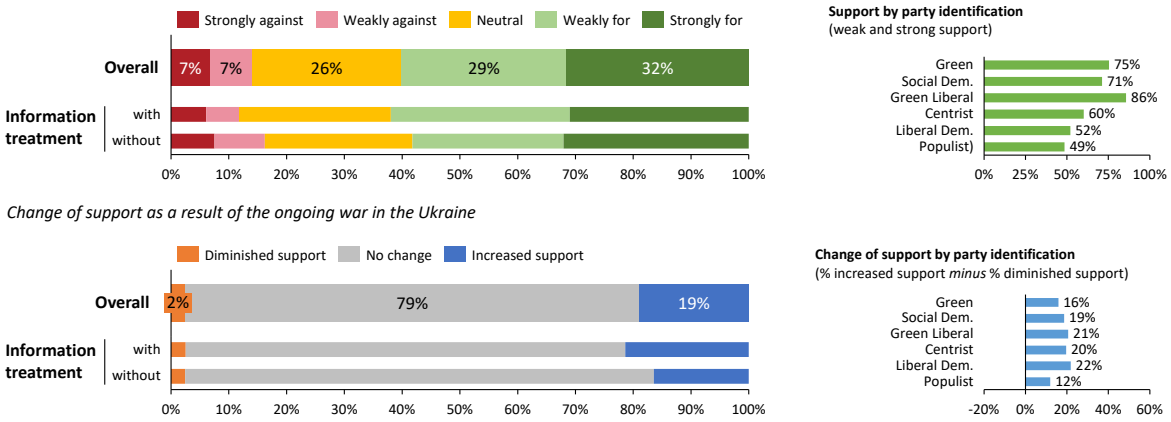

Figure 9: Support for a policy to streamline the permitting process for wind-turbines, contingent on maintaining the rights of local communities to object to wind-power based on legitimate environmental concerns

Figure 10, finally, shows support for a policy to develop technical options in hard-to-decarbonize sectors. Support levels are high, only falling narrowly below 50% in the Populist party. Support has also risen, relatively consistently, across the political spectrum.

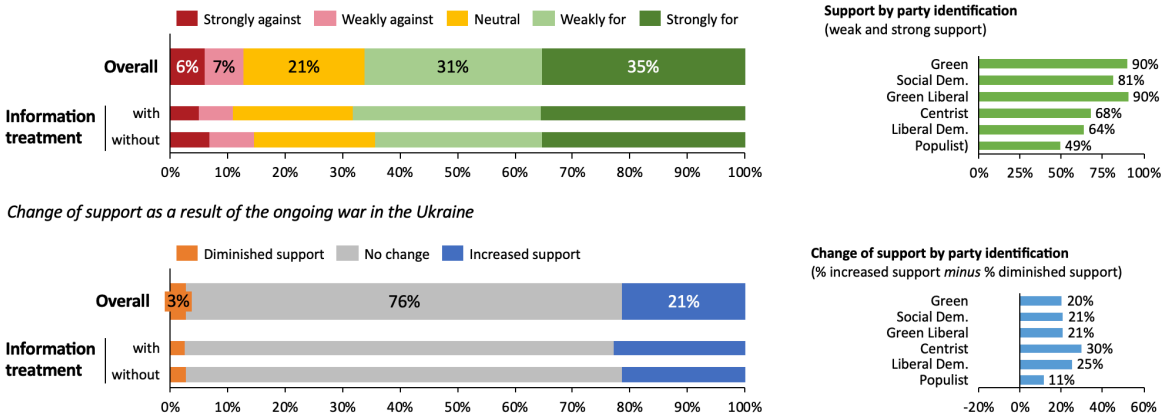

Figure 10: Support for increasing the financial support (e.g., via a significant climate fund) for the development and market introduction of novel technologies that are required to replace fossil fuels in sectors like aviation or high-temperature processes in the industry

Comparing the proposed policy changes relating to fossil fuel use (Figures 1–5) and those concerning clean energy support (Figures 6–10), we do not see a clear pattern, with one of the groups seeing a generally higher change in support following the Russian invasion. For instance, both policy proposals to completely end the use of fossil fuels by 2050, and policy proposals accelerating the deployment of solar and wind power became substantially more popular. While in the context of the war, the dependency on oil & gas is arguably more salient, respondents seem to be aware that the need to phase out fossil fuels, and the need to phase in renewables are closely linked. Interestingly, in almost all contexts, the difference between respondents that received an information treatment (i.e. background scientific information) and those without is not statistically significant. This could be due to the fact that people have firm political opinions that are not be changed through additional information (which we consider less likely as actually quite a large share of respondents report to have increased or decreased support

since the war), or because people are already well informed given the multiple recent energy policy debates (which we consider more likely).

5 Discussion and conclusion

Across all the policies we examined, we found levels of support that would justify policy action taking place, with the exception of installing new gas-fired power stations. According to the respondents, the support for policies to reduce fossil fuels strongly increased due to the war in Ukraine – now, 62% support (strongly or weakly) the phase-out of fossil fuels by 2050, with a clear majority in all party groups except for the Populist party. There seems to be a particular high support for banning fossil fuel heating systems (with some qualifications) already by 2025, also among homeowners. Such a policy could heavily contribute to the decarbonization of the Swiss economy, given that the building sector was responsible for 24% of CO_2 emissions in 2020 (BAFU, 2022). Overall, the increased public support for these policies is in line with an interpretation of the Ukraine war-related energy problems as being related to the reliance on imported fossil fuels in general, such that a solution needs to address the use of fossil fuels in general (as compared to, for instance, simply diversifying the countries from which oil and gas are being imported).

Compared to fossil fuel phase-out policies, the support for policies that aim at accelerating the role-out of renewables, such as solar and wind, is even higher (79% strong or weak support), including among supporters of the populist party (69%), due to about a third of the respondents who report an increased level of support since the war. The level of support remains high also in questions concerning more specific measures to accelerate renewables roll-out, such as allowing for ground-mounted solar PV and streamlining the permitting process for wind turbines – two topics that have been quite controversial in Switzerland so far (Vuichard et al., 2022, 2021). The increased support for renewable energy policies further supports an interpretation of the war where the main problem is fossil fuel dependence, which can be solved by expanding solar and wind power as a replacement.

Besides policies that directly address the energy sector, we also measured the support for financial policies that encourage financial actors to reduce fossil fuel investments, and thereby address the energy sector indirectly. There is a (slim) majority for such interventions among the respondents, 20% of whom reported that their support had grown since the war. Given the potentially large effect of comparably modest changes to financial regulation (Farmer et al., 2019), such policies could have an effect well beyond national borders, given the international importance of the Zurich and Geneva financial centers.

From a climate policy point of view, our results are encouraging. It should be stressed, however, that there is no guarantee that a "fossil fuel dependency" interpretation of energy concerns will automatically translate into more ambitious clean energy policies. As has been the case with other focusing events in the past, there are alternative interpretations leading to different solutions (e.g., increase the import capacity for LNG, or reduce the burden of high energy prices through subsidies), and affected industries are strongly engaged to frame the problem in a way that leads to their preferred solutions. Past research has highlighted the importance of agency in shaping socio-political dynamics in climate change mitigation (Stadelmann-Steffen et al., 2021), and stakeholders that aim to increase the stringency of climate policies need to actively engage in framing the debate (Lachapelle et al., 2021). Policymakers should be encouraged by the high level of support for new policies, and use the window of opportunity for ambitious policy change.

While this Perspective provides early evidence on shifting policy support, it remains to be seen how durable the observed patterns will be. Future studies, particularly ones using panel analyses, can provide insights in that regard. In addition, future research should evaluate public opinion in other countries that are reliant on energy imports from Russia. While many general sentiments in Switzerland are arguably comparable to those in some other European countries, some contextual factors, such as trust in government, might differ (Davidovic and Harring, 2020).

Looking beyond the climate and energy sphere, as of May 2022, it appears increasingly likely that from a future point of view, the Russian invasion of Ukraine indeed could be seen as a historical turning point. Following the dreadful human suffering and massive economic damage in Ukraine, it is hard to imagine that the political, and economic relations between Russia and the West will recover in the foreseeable future. An economic recession in Western European countries cannot be ruled out, which would trigger economic policy interventions. During past crises, stimuli packages unfortunately had mixed outcomes with respect to climate policy goals, as they partly fostered high-carbon intensive infrastructure (Steffen et al., 2020). Depending on the interpretation of the current focusing events, such outcomes could happen again, as the current discussions about increasing hard coal use and building new natural gas infrastructure show. There is a key difference to the COVID-19 crisis and the Global Financial Crisis, though: Given the hitherto existing dependency on Russian oil & gas, fundamental changes to their energy policy need to be at the heart of Western European's reaction to the current events, not just a potential collateral to policies addressing primarily different objectives (like financial stability, or containing a virus). Hence, the window of opportunity for a step change in policy ambition towards net-zero energy systems is there. History will tell whether the opportunity is taken – the level of public support for clean energy policies should strongly encourage climate policy advocates to work in that direction.

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