

# **Introduction**

## **Were national response measures to the energy crisis social and climate friendly?**

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### **1. Introduction**

The general objective of this research project, conducted by the ETUI, was to deepen the alignment between social (welfare) and climate policy at a critical time; that is, in a new geopolitical situation when the implementation of the European Green Deal is reaching a critical phase. We have sought to stimulate the debate about a comprehensive and integrated policy framework that can speed up the energy transition while implementing a more robust social anchor. The policy focus of the project is about strengthening the social dimension of the green transition, but the overall context is about how to reconstruct the welfare state from being a stabiliser of a fossil fuel-based resource depleting the economy into a facilitator of the green transition.

Within this broader context, this publication analyses the effects and responses to an unprecedented geopolitical crisis that has blatantly exposed Europe's vulnerabilities and its reliance on cheap fossil fuel. The sudden cut in the supply of fossil energy after Russia's invasion of Ukraine has led to an explosion of energy prices that has turned into a cost of living crisis.

The energy and cost-of-living crisis can be seen as a stress test for both the European Green Deal and the European Social Model.

The aim of this publication is to assess how different national measures are dealing with the short and medium-term effects of the fossil energy price crisis – drawing also on National Energy and Climate Plans and National Recovery and Resilience Plans – with a focus on current energy price shield measures and incentives for energy efficiency and energy conversion. The main question is how national measures have been able to align social and climate policy objectives.

There is a broad understanding that medium and long-term measures are about speeding up the energy transition as renewables are not only seen as the way to carbon neutrality, but also as guarantees of energy security.

## 2. Europe's energy crisis – background

Europe managed to get through the much-feared 2022/23 winter without energy shortages, power cuts and recession, showing a considerable level of resilience although at some considerable cost: according to Bruegel (Sgaravatti et al. 2023), between September 2021 and March 2023 EU Member States allocated 646 billion euros to shield consumers from rising energy costs.

The national case studies in this book reveal what measures, including subsidies, tax cuts and price controls, have been applied, whether and how these have been targeted and whether there is a climate dividend. The authors also examine how the potentially conflicting objectives have been tackled by national governments. They take account of good practices to be identified for where short-term social protection can be aligned with longer term ecological objectives.

While the future is clearly in cheaper renewables, the challenge has been one of how to alleviate the crisis that has threatened the livelihoods of tens of millions of Europeans.

Concerns about inequality in the context of climate change and the green transformation have frequently been raised in recent years. As referred to in earlier publications (Galgóczi and Akgüç 2021; Galgóczi 2023), such inequalities have multiple dimensions and range from differential responsibility and vulnerability to the varying impact of low-carbon transitions that include unequal social and employment effects but also an inequitable distribution of the benefits. Studies indicate that marginalised groups hardly benefit from job creation in the US renewable energy sector, with low representations of women and people of colour (E2 2021).

While market mechanisms – such as the EU Emissions Trading System (EU ETS) – that set price signals for market actors are important in changing investment and behavioural patterns, they have significant regressive distributional effects, disproportionately affecting low income households (Cabrita et al. 2021). Feed-in tariffs with higher electricity prices to finance investments in renewables, for example, hit low income households hardest (Zachmann et al. 2018). Even before the price hikes from late 2021 and the price explosion because of the war in Ukraine, energy poverty was at an alarming level in many EU Member States. Poorer households also have less capacity to change to low to zero-carbon options, such as electric vehicles, rooftop solar panels or heat pumps (Galgóczi and Akgüç 2021). Uneven distributions of low-carbon energy technologies and rising electricity prices raise significant concerns for environmental and energy justice (Kelly et al. 2020).

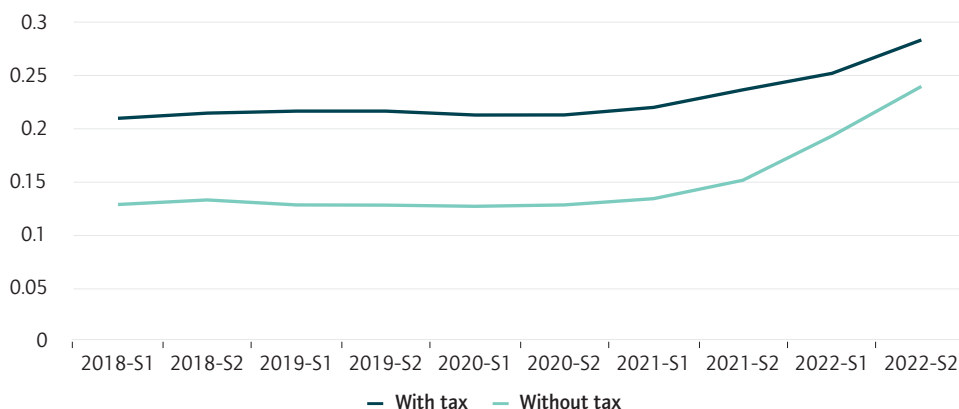
The 'cost of living crisis' triggered by runaway fossil fuel energy prices amplifies these inequalities.

In terms of the actual electricity prices for households there is great variety across the EU (Eurostat 2023a). Electricity prices in the second half of 2022 were highest in Denmark (0.5871 euros/kWh), Belgium (0.4489), Ireland (0.4199) and Czechia (0.3844), and lowest in Hungary (0.1084) and Bulgaria (0.1147), with the EU average

price for electricity by household consumers in this period being 0.2840 euros/kWh. Figure 1 shows the development of electricity prices in the EU27 between 2018 and 2022, showing both the price that includes all taxes and levies and the one without taxes.

Between the second half of 2020 and 2022, electricity prices before taxes and levies had nearly doubled (growing by 87%) but increased by only 32.6% after all taxes and levies. It is noticeable that the weight of taxes decreased substantially, from 69.2% in the first half of 2019 to just 18.3% in the second half of 2022. This reflects the impact of measures to alleviate EU household electricity costs.

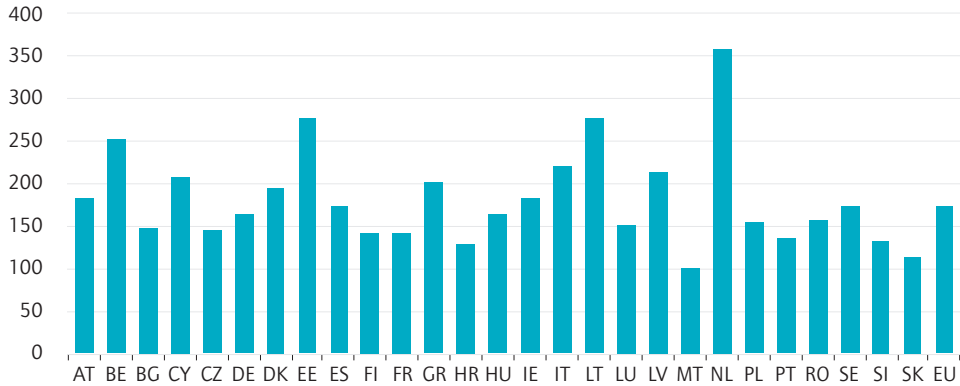
Figure 1 Electricity prices for household consumers - biannual data (euros/kWh 2018-2022), EU27, with and without taxes



Source: Eurostat (2023a).

It should be noted that there is no transparency in prices and price developments; nobody knows what is the actual price of a unit of electricity or gas at a given place and time, and how much a consumer is actually supposed to pay. What was the average gas price when filling up national gas reserves, what supplier contracts are in effect and how are individual consumers affected? Uncertainty and a lack of transparency exist on a massive scale. An illustration of this is provided by Eurostat figures on the Harmonised Energy Price Index (combining electricity, gas and fuel prices) for individual Member States, as shown in Figure 2. While for the EU as a whole the Index is 170 (a figure that has no practical relevance), Malta had no change at all while the Index for the Netherlands is 370.

Figure 2 Harmonised Energy Price\* Index in EU Member States, September 2022 (2015=100)



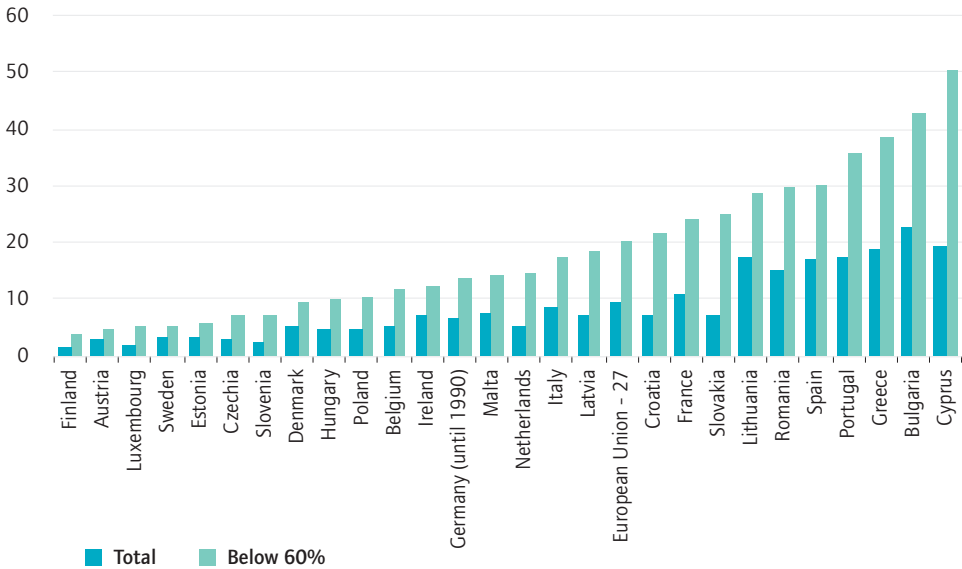
\*Electricity, gas, fuels.  
Source: Destatis (2022).

Trends indicate that the effects of higher energy costs are harshest on vulnerable lower income groups whereas richer households may even increase their consumption and carbon footprints (as, for example, fast-growing civil aviation and SUV sales show; IEA 2022). These trends indicate that the carbon footprint of the rich has been less affected by the global slowdown. The apparent outcome is that, while the cost of living crisis may bring some incremental improvement in emissions, it is aggravating inequalities with devastating social effects. We also saw this pattern in the financial crisis as well as in the pandemic.

The Institute for European Environmental Policy has calculated the share of energy-related household expenditure by EU-wide income deciles and forms of settlement (IEEP 2022). Even before the big increase in energy prices, up to 13% of household expenditure was related to energy. The rural population in the four lowest income deciles was most affected (up to 12%), while the urban population in the tenth decile was the least affected (5%). If we assume an average doubling of energy-related expenditure, this is likely to be having a dramatic effect on those whose shares were already high before the price hike.

According to Eurostat (2023b), compared to 2021, energy poverty in the EU27 increased by 35% in 2022, as 9.3% of the total population, or 41.5 million people, could not afford to keep their homes adequately warm, as shown in Figure 3. Furthermore, 20.2% of those at risk of poverty were unable to maintain an adequate home temperature, while in Greece, Bulgaria and Cyprus up to 50% of poorer households suffered energy poverty. Allianz Research (Allianz 2022) estimated that the share of the population facing energy poverty could have doubled by the end of 2022 compared with 2021.

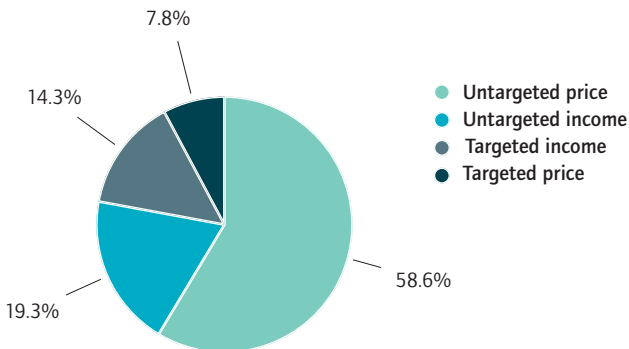
Figure 3 Energy poverty – share of population unable to keep their home warm (% , 2022)



Source: Eurostat (2023b).

Figure 4 highlights that governments in the EU27 have implemented non-targeted price measures (58.6% of the total) – for example, cuts to excise duties and VAT – followed by non-targeted income support measures (19.2%). Targeted income support measures make up a further 14.3% while targeted price measures account for the remaining 7.8%. On this basis, non-targeted broad-based measures are dominant (almost 80% of total support measures) – reaching the entire population regardless of their income or any other characteristics.

Figure 4 The distribution of allocated and earmarked funding to shield EU households (Sep 2021 - Jan 2023), as % of the total (432 billion euros)



Note: Figure 4 excludes Germany's third package, for which no details were available at the time of the compilation of the data.  
Source: Bruegel (Sgaravatti et al. 2023).

### 3. Lessons from the national studies

The national case studies in this publication reveal that the short-term measures have mostly been broad-based. It is apparent that the main political objective has been to avoid a recession – by maintaining economic growth – while limiting energy price rises also in order to reduce secondary inflation effects. Regarding the longer-term measures, one consideration is whether policies aimed at decarbonising the energy system and increasing energy efficiency explicitly integrate social objectives: for example, whether subsidies for improving the energy efficiency of private residences or of replacing old appliances are targeted on those with lower incomes.

The national case studies presented below offer a wide range of practices, including good ones that indicate that social protection can indeed be aligned with longer term ecological objectives. Seven national case studies follow to show how Member States have balanced social and ecological objectives.

The Austrian government presented two minor relief programmes in January and March 2022, followed by a third and larger programme in June 2022. Additional measures, such as an electricity price cap, further subsidies for firms, the reimbursement of charges on the use of the electricity grid and assistance payments for housing rents were announced later. Taken together, the government has implemented temporary measures as well as permanent reforms to cushion the burden of inflation on households and firms.

Among the temporary measures for households, one-off payments have played a dominant role. The most expensive one-off payment was a per capita transfer of 250 euros (125 euros per child) at a total cost of 2 billion. Besides the temporary reduction of special taxes on electricity and gas from April 2022 to June 2023, no cuts in consumption taxes have been implemented. The electricity price cap being applied to households (not firms) from December 2022 until June 2024 constitutes the only price dampening measure undertaken. The cap is designed in the following way: for up to 2900 kWh consumption per household, the state contributes with a maximum of 30 cents/kWh of electricity consumption on condition that households pay the first 10c of the kWh price before the subsidy kicks in. Value added tax must, however, be paid on the whole price.

The volume of the support measures provided by the Austrian government is high. In terms of share of GDP, Austria ranks fourth among all EU countries (Sgaravatti et al. 2023). As regards the overall distributional effect of these measures, many households that do not need government support have benefited from relatively high transfers while low income groups cannot cover their additional expenses. From a distributional point of view, two different periods can be distinguished. In 2022, the effect of the measures was progressive especially due to the one-off payments for vulnerable groups and low income households. On average, the transfers received by the bottom 20% of the income distribution exceeded the additional cost due to inflation. Nevertheless, many households that were not dependent on support received generous transfers. In 2023, high income groups received the highest transfers in absolute terms, while the

bottom 20% suffering the strongest price effects experienced a decrease in purchasing power of 13.5%.

Taking both years together, the policy mix that has been implemented is very expensive and, overall, poorly targeted. Additionally, it barely poses any incentives for a reduction in energy consumption and carbon emissions.

The case of France illustrates well how macroeconomic stabilisation has been the main driving force of the measures. In early 2023, energy consumption prices for households were 37% higher than at the start of 2020, against 47% in the euro area. The main measure has been a mechanism freezing regulated sales tariffs for gas and limiting the rise in regulated sales tariffs for electricity. At a gross budgetary cost of around 100 billion euros over two years (3.6 percentage points of GDP), these measures are estimated to have reduced cumulative inflation by 3.4 percentage points (direct effects) and to have reduced the effects of the energy shock over the 2022-23 period by almost two-thirds. The government has pointed out that, by limiting energy price rises, the main objective is to safeguard the purchasing power of the population. These – non-targeted – price control measures amount to 80% of the fiscal measures implemented between 2021 and 2023 to tackle the energy crisis. One-off household support for lower income groups makes up a 20% share of the measures.

The authors have also calculated the effect of the measures as a percentage of the standard of living for different income groups, finding this to be 5.1% in the first quintile and up to 2.2% for the wealthiest households. In absolute terms, support for the latter is twice the amount that the poorest 20% of households have received. It is hard to see how these measures can be portrayed as ‘social’.

Germany is a perfect demonstration of the complexity of government measures which have come in three major packages and which represent the highest spending by a Member State. Beside the commonly used policy tools, including tax cuts, price caps and one-off income support measures, Germany also applied a wide range of top-ups to benefits (from housing support and childcare to student benefits), but also with government support for one-off pay rises by scrapping taxes and social security contributions on such pay supplements (if under 1500 euros).

In absolute terms the tax and benefit changes had a substantial income stabilising effect across all household types. In 2022 this ranged from 132 euros to 575 euros while in 2023 the range was substantially greater: 110 euros to 1364 euros. Based on research by the Institut für Makroökonomie und Konjunkturforschung (IMK; Macroeconomic Policy Institute), the author of the chapter notes that, due to the complexity of the measures and their interactions, it is difficult to identify clear patterns across household types. Some examples show, for example, that among single person households, in 2022 the absolute benefit initially fell (from 347 euros to 132 euros) from low to high income categories; however, the top-earning single person households received the most (575 euros). In 2023 the absolute support is U-shaped: those on lower (but not the lowest) incomes receive the least; and the top income households are the best supported of all (1041 euros). Among couples with 2 children,

in 2023 a U-shaped pattern also emerges with the middle-income category receiving lower levels of support.

The impact of the exemption from taxes and social security contributions for those taking part of their pay rise as a one-off pay supplement has been substantial and has also benefited more those on higher incomes.

Regarding the impact of direct price interventions, while the gas and electricity price brakes have had some effect (a one percentage point reduction in inflation for 2023), the impact of the others (e.g. the temporary VAT reduction and commuter support) has been small overall.

Combining the fiscal measures with the household-specific inflation burden in 2022 and 2023 reveals that, overall, the substantial fiscal measures dampened but in no way fully compensated the real income shock. While the distributional outcomes cannot be easily classified as ‘progressive’ or ‘regressive’, the author states that the measures have clearly not been closely targeted on the least well-off facing the highest inflation burden: considerable resources have been devoted to high income households. Being a wage-earner covered by a collective agreement that took advantage of the concession on one-off wage supplements turns out to have been an important determinant of the extent to which policy measures shielded the household in question from the inflationary shock to net incomes.

The example of Greece shows that using mostly blunt instruments in a very generous way is both socially unjust and detrimental to climate objectives. Subsidising energy consumption for the upper income quintiles fails to apply energy efficiency incentives for those who could afford, given their higher consumption, to withstand the price rises, while most of the public resources have been used in relation to people who did not need them, squandering the scarce resources of a country under fiscal constraints (the money could have been used for better purposes). Huge resources have been mobilised with poorly targeted measures.

In Italy, the gas price increase has exceeded the euro area average due to the high dependence on Russian imports, with a peak rise of 96% compared to the same month of the previous year, while for the euro area the peak was a 75% rise. Due to the high Italian dependency on imported gas and the dominance of gas in electricity generation, the divergence in electricity prices was even greater with a peak in Italy reaching an increase of 199% compared to the peak euro area average of 45.6%.

Italy’s electricity and gas markets have been shaped by the liberalisation policies of the European Commission, culminating in the 1999 Italian legislation that abolished former public monopolies and allowed new actors into markets. State-owned electricity and gas suppliers were turned into companies listed on the stock market; and a separation between generation and distribution for electricity and gas was introduced, creating room for market transactions. The consumer market was also liberalised with competition between providers and the differentiation of contracts. Italy’s newly created regulatory authority has also used international market benchmarks. The



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reliance on financial futures markets for setting the price of gas has expanded volatility and uncertainty at the critical moment of the security of the energy supply being in question; and the logic of financial speculation has seriously contributed to the surge in gas prices both in Europe and Italy. The policy measures of the European Commission have long been missing and the dynamic price cap it has introduced is ineffective. As a result, Italy had no effective market regulation in place when the energy crisis hit.

Italian governments have implemented policies primarily aimed at compensating the firms and households that have been hit hardest by the rises in energy and food prices. Little action, however, has been taken in terms of the regulation of the previously liberalised energy market, or concerning energy policy and support for renewable sources. Consecutive governments have allocated more than 116 billion euros to compensatory measures in respect of the price hikes: approximately 70 billion for 2022 and over 32 billion for 2023. These include tax reductions on energy goods, subsidies to firms and one-off payments to low income households.

The reduction in VAT and excise duties on gas and electricity, and the elimination of general system charges, have been seen as controversial measures. From an environmental perspective, the generous use of public resources (including foregone tax incomes) to reduce market prices for users has eliminated the incentive to reduce energy consumption. In the social context, the amount of the benefit has been larger for richer households than for poorer ones; this has allowed high income Italians to maintain their energy consumption habits without modification or rationalisation.

For Poland the specificity of the compensation approach applied by the government has been its focus on households, with a strong bias towards lowering indirect taxes, while firms have been generally supposed to pay market prices. Individual measures were broadly defined and not particularly targeted towards shielding the most vulnerable parts of the population.

From the beginning of 2022, measures to alleviate the effects of the energy crisis have been focused on controlling prices for end users through fiscal means, with the strongest input from decreases in indirect taxes on energy, amounting to some 10 billion euros. The tax cuts in Poland are among the most generous in the whole of the EU. The second part of the fiscal package was constituted from direct transfers to compensate for the rise in the price of energy for heating (coal and electricity), amounting to about five billion euros distributed in the last quarter of 2022. In 2023 the government, facing strongly deteriorating macroeconomic conditions which were shrinking budgetary revenues, decided to revert most of the fiscal measures and turned towards putting price caps on energy use for households and small companies. These are supposed to be borne by energy providers (with some fiscal assistance for those most strongly affected by the regulation).

In the view of the authors of this chapter, the measures applied by the Polish government to alleviate the energy crisis were poorly targeted and have resulted in relatively high fiscal costs which, at least in part, were avoidable. Moreover, the interventions directly affecting final prices have increased consumer demand for energy and, given the Polish

energy mix, increased fossil fuel use. On top of that, more policy attention has been paid to the stabilisation and diversification of gas and coal supplies than to accelerated decarbonisation and energy savings.

In Spain, the government has promoted a wide range of measures to reduce energy prices and alleviate the consequences for the disposable income of households, especially for the most vulnerable. Measures have been focused on energy markets and include the lowering of indirect taxes, reducing the regulated part of the bill and increasing the discounts for vulnerable consumers. Action has also been taken to limit the rise in international gas prices being passed on to natural gas consumers. The most relevant decision, however, is the introduction of a cap on the price of gas in the wholesale electricity market which could have led to a reduction of nearly 20% in the retail price of electricity. With the 'Iberian exception' Spain has set a good example of how to control wholesale prices and decouple the price of domestic electricity from the international gas market price. Measures have also been partially targeted to benefit vulnerable and severely vulnerable groups. Still, as the authors point out with reference to Bank of Spain calculations, only 15-20% of the measures qualify as targeted.

#### **4. Conclusion**

Social and climate policy objectives are not necessarily in conflict. These chapters actually reveal that governments' short-term support measures (i.e. those in the focus of this publication), mobilising huge resources to shield households from the effects of the extraordinary increases in fossil energy prices, had primarily a macroeconomic stabilisation objective. Medium and long-term measures to diversify energy networks and invest in energy efficiency and renewables were meant to be more transformative. These were the ones that governments had seen as beneficial in addressing the climate policy challenges.

The chapters highlight that, with some 80% of spending being directed to broad-based measures, short-term government support was poorly targeted. As a result, both social and climate policy goals were rather sidelined as the ultimate price effect tended to be regressive with the biggest beneficiaries (in terms of the absolute amount) of public fossil fuel subsidies being higher income groups. Their higher carbon footprints have been co-financed by scarce public resources and have not provided incentives to reduce fossil energy consumption. The failure to align economic and distributive goals, while also having a climate dividend, thus represents a missed opportunity.

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