

A Macroeconomics Policy Fit for the Energy Transition

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With rising inflation and energy security under threat, European governments are facing a perfect storm as they look to balance the cost of living, the war in Ukraine, and climate objectives. The risk is that governments abandon serious forward-thinking climate policy and opt for short-term compensation schemes while trying to bring energy prices down. This overlooks that a successful energy transition requires high fossil-fuel energy prices. Igor Matutinović makes the case for immediate public support for heating, cooling and food costs as a way for governments to protect households without sacrificing the shift to a greener economy.

The European Union is experiencing an unprecedented combination of an energy price shock and energy security risk. While oil prices collapsed in the first months of the pandemic in 2020, they have been steadily rising since April 2020, as a consequence of OPEC production cuts, and from March 2021, optimism about the end of the pandemic. Natural gas prices followed suit.

The Russian invasion of Ukraine made for the perfect storm and pushed fossil-fuel prices even higher, especially in Europe. Sharp increases in oil prices spread to all economic sectors, while the rise in the price of natural gas hit food production particularly hard. Petrol prices in EU have climbed more than 50 per cent since 2021, driving up personal and business transportation costs. The average June-on-June household electricity bills have increased by 42 per cent, while gas bills rose by a staggering 83 per cent. Altogether, Eurozone inflation was running at a record 8.6 per cent in June.

Russia is a crucial supplier of natural gas and oil to the EU. In 2021, the European Union imported 155 billion cubic meters of natural gas from Russia, which accounts for about 45 per cent of gas imports into the EU and close to 40 per cent of total gas consumption. Before the Ukraine crisis, Russia supplied more than a quarter of the EU's petroleum. These supplies are now under double pressure from EU sanctions and possible Russian supply retaliations. NATO has estimated that the Russian-Ukrainian conflict could last for several years.

Weaning off Russian fossil fuel supplies at the same time as securing an uninterrupted flow of energy represents a major strategic challenge for EU energy security. As a tentative response, the European Commission presented the REPowerEU Plan, which aims at phasing out all Russian fossil fuel imports by 2027. In the short term, however, there is a risk that coal is used as a short-term replacement for Russian gas. Whatever happens, the pressure on gas and electricity prices will likely remain high in the EU even if oil prices on the world market start to fall (as the divergent paths of gas prices in the US and the EU show^[1]).

National governments have intervened in the energy market with various measures, including energy tax cuts, cash handouts for households, power and gas bill subsidies, electricity price caps, and a windfall tax on energy profits. Capping retail petrol prices or reducing fuel taxes has been a widespread measure to artificially reduce costs at the pump. However, some countries, like Germany, Ireland, and France have pursued a more farsighted policy by cutting public transport prices to make it attractive.

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To slow inflation more generally, the European Central Bank ended net asset purchases on 1 July, and raised its three key interest rates by 50 basis points from minus 0.5 per cent to 0 per cent, on 21 July. Under the present circumstance, this classical, textbook approach may do more harm than good to the economy and society.

What distinguishes this hike in energy prices and inflationary pressure from similar events in the past? Weaning Europe off Russian fossil fuels apart, it appears that the major concern for policymakers is to get through this transient period of high prices until they settle down, so that they can return to their primary task of fostering economic growth, green or otherwise. But, looking beyond short-term remedies, one question looms large: could this energy crisis be an opportunity to push the EU energy transition on a faster track and thus reduce the risk of transgressing the 1.5 degrees Celsius warming threshold?

Decarbonising economies require high and stable fossil fuel prices

The backdrop to this rise in fossil-fuel prices is the climate crisis and international pledges to reduce emissions. According to the scenarios from the latest [IPCC report](#), limiting warming to around 1.5 degrees Celsius requires global greenhouse gas emissions to peak no later than 2025 and to be reduced by 43 per cent by 2030. The EU has committed itself to achieving climate neutrality in the EU by 2050 and adopted the goal of reducing net emissions by 55 per cent by 2030. The window of opportunity to avoid transgressing the 1.5 threshold is quickly closing - we have no more than eight years to stop irreversible damage from climate change.

The energy transition cannot work with low fossil-fuel prices and without considerable changes in the behaviour of citizens, businesses, and the state. In a market economy, by definition, high prices of fossil fuels are one of the major drivers of changes in energy use and decarbonisation. In this context, policy efforts to prevent the prices of fossil fuels from rising are misplaced and counterproductive.

If the logic of market functioning is correct, persistently high fossil-fuel prices would likely stimulate transport and manufacturing towards energy efficiency and decarbonisation, increasing demand for renewable energy. Similarly, consumers would start seeking affordable but highly efficient public transport and, under the price pressure, opt for less energy-intensive lifestyles. High and stable fossil fuel prices are also indispensable for

businesses willing to enact long-term strategies to reduce emissions and the energy content of their products and services. All these changes would create a positive feedback loop of change between industry and consumers, which would eventually transform the economy and society.

EU governments should therefore not be concerned with reducing the price of fossil fuels but preventing prices from falling again to levels that signal to industry and consumers that no behavioural changes are necessary. The long-term policy goal should be to secure a degree of price-signal stability, which is essential for adaptive processes to gain momentum in the economy.

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Let the fossil fuel prices soar high

It is, therefore, necessary to look beyond the immediate problems that the current energy crisis and inflation pose and seek a correspondence between short and long-term goals and policies. In the immediate short-term, the prices of fossil fuels should be left to the market, while government policy should focus on the negative consequences of energy-induced inflation on households.

Government should compensate households for the extra costs of living but not intervene in the costs of fossil fuels-based individual transport. Any growth in energy prices also spreads unequally to all products and services. Anti-inflationary policy must therefore determine which aspects of the population's standard of living it wishes to protect. Heating, cooling, and food costs constitute the basics of the material standard of living that the state should secure. While so far we have tended to see arbitrary cash handouts, compensation schemes grounded in the actual energy requirements of households would be more effective responses.

National heating costs for households can be estimated from the monthly consumption of gas required to heat an average useful dwelling space to a temperature of, say, 21 degrees Celsius calculated on the bases of five-year average of outside temperatures in the months that usually require heating. In the same way, one can estimate the electricity consumption that cools the same space to, say, 26 degrees Celsius in the summer months. Gas prices in Europe started their exponential growth in September 2021, and it is up to policymakers to decide which of the occurred increases in heating costs would already qualify for compensation. After establishing a baseline price, the state would compensate for 80 per cent of the rise in heating/cooling costs for the average dwelling area. The reason for the incomplete coverage of costs lies in the stimulation of households to rationalise their energy consumption and invest in the energy efficiency of housing.

To calculate compensation for the extra food cost, the government can use national prices for the food basket that refer to the "monthly budget required for an adequate food intake by three reference households (consisting of children and people of working age, in good

health, without disabilities and living in the capital city).” Starting from a baseline price, national governments would fully compensate for rises in their specific food baskets.

The extra monthly costs for heating/cooling and food could be compensated for by a tax deduction on personal income for employees and an exceptional pension supplement for retirees. A citizen would qualify for a tax deduction by presenting a property ownership certificate or rental agreement to the tax office. Regarding tax deductions for food, these would be applied automatically to all taxpayers and include an extra allowance for children. Estimates of costs and payments are calculated monthly or quarterly, depending on the technical and administrative capabilities of the state. If a government opted for a universal compensation scheme, social equity would be partially incorporated through differences in real heating costs compared to the reference average dwelling space. Assuming that richer households have larger than average dwellings and poorer ones lower, richer households would receive less compensation, while the poorer ones would receive more compensation than their actual costs.

Note that unlike VAT reductions or raising the lowest threshold for income tax, this policy is neutral with respect to budget revenues, and compensation to families is not arbitrary but inflation-dependent and based on real values. However, it would involve increasing government spending, substantially and on a prolonged basis – as discussed below.

Keeping fossil fuel prices high in the transition age

This short-term compensation policy must be placed in the longer-term context of the climate and complemented with measures that take into account the need for rapid decarbonisation and energy transition.

If the EU wishes to efficiently manage a fast energy transition, it must secure a correct fossil-fuel price signal to the market. The essential step in that direction is to withdraw subsidies from the fossil-fuel industry. EU countries spent 56 billion euros on fossil fuel subsidies in 2019, with 15 states spending more on fossil fuels than green energy. Removing fossil-fuel subsidies would lay bare the real cost of production of oil, coal and natural gas, and likely decrease speculations and price volatility in the energy markets.

In the next step, the European Union should apply a common carbon tax instead of the current variety of taxes which distort a level playing field. The carbon tax could increase over the ten-year period with previously announced yearly dynamics up to a maximum rate, established to represent a strong stimulus for the industry to introduce technological adjustments and for households to change energy use and transportation habits. In this way, fossil fuel prices would be kept permanently high and increase with predictable dynamics while at the same time avoiding counterproductive price volatility in both directions. To prevent “carbon leakage” or unfair competition from countries with low greenhouse gas emission standards, the EU already adopted the Carbon Border Adjustment Mechanism that puts a carbon price on imports of a targeted selection of products, which in the future can be expanded to include all industrial products.

Unfortunately, the European Parliament made the opposite decision on 8 June, and rejected plans to amend the EU Emissions Trading System to include carbon from transport and construction. The proposals would have also removed current exceptions to the carbon-

trading scheme for European industry. Another change would have introduced a social climate fund to help low-income households to pay for energy-efficiency improvements.

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Such a fund is necessary because carbon taxation is regressive and affects suburban middle-class residents disproportionately compared to affluent residents of metropolitan centres. As a carbon tax increases, its effects on vulnerable strata of the population may prove politically unbearable. With persistently high fossil-fuel prices, food costs will surely go up until transportation and agricultural sectors decarbonize to a large extent. Energy poverty already affects between 50 and 125 million people across Europe, and a carbon tax would increase these numbers considerably.

A carbon tax must therefore be accompanied by adequate welfare measures. Here the policy designed for the short term – compensating households for the extra costs of living under the energy price shock – systemically transfers into a scheme for welfare protection during the more extended energy transition period. This scheme should invariably include cutting public transportation prices to a minimum while providing a much wider and more efficient service, compared to the present. The energy transition process includes a transition from mass individual to mass public transportation, urban and interurban alike. For that purpose, the European Central Bank would have to secure funds for investments necessary to transform the current, individual-transport, oil-based infrastructure for all EU members. It is a rather absurd idea to expect that about 249 million cars in the EU will be replaced with electric vehicles. It would be an enormous waste of resources, energy, and raw materials like cobalt, lithium, and rare earth elements. Our cities and interurban transport networks will then have to be adapted to the needs of mass public transport, which will require significant investments over a long period.

Eventually, revenues from existing or newly introduced energy taxes and carbon pricing policies will decrease, reaching zero, because of the erosion of the tax base as the policies work effectively. This calls for an overhaul of the whole tax system and the gradual introduction of ecological tax reform, which aims “to shift the burden of taxation away from productive activities and onto pollutants”. Over time, ecological tax reform would extend to energy use and material content of products and services instead of labour, thus pushing energy and material efficiency to the frontline of business interest and promoting full employment.

The role of the business sector in the energy transition

What should the role of businesses be in this transition? Businesses can reserve the right to operate by meeting societal demands. We expect them to serve society, not the other way around. Nobel laureate Joseph E. Stiglitz stated that “one of the key reasons why our environment is in such a precarious condition is that corporations have not, on their own, lived up to their social responsibilities. In 2019, only 15 per cent of the world’s top 500 companies by market capitalisation were in line with the goals of the Paris Agreement.

Therefore, Stiglitz's argument that "without effective regulations and a real price to pay for polluting, there is no reason whatsoever to believe that they will behave differently than they have" is in line with the policy of introducing a carbon tax and putting a real price on fossil fuels. Society needs a business sector oriented as part of a government-led mission economy that pays its fair share of taxes. We don't need billion-dollar valued entrepreneurs investing in private space programmes – there are more urgent priorities on Earth.

Society needs businesses that understand the climate crisis and are willing to contribute proactively to finding solutions, like those gathered under the umbrella of the World Business Council for Sustainable Development. They can participate in climate and energy government projects and benefit from direct funding. We need the business sector, but the government should tilt the playing field towards those actors who are ready and willing to play in the post-neoliberal world. According to a recent McKinsey study, energy transition could result in a gain of about 200 million and a loss of about 185 million direct and indirect jobs globally by 2050. The EU will have to be able to accommodate the net jobs lost through public investments and a denser social safety net. After all, the European Green Deal is already addressing this issue.

However, it would be naïve to expect that all businesses will cooperate in the energy transition. For example, five major oil corporations spent 1 billion dollars on climate lobbying against Paris Agreement-related regulations, while the world's biggest 60 banks have provided 3.8 trillion dollars of financing for fossil fuel companies since the Paris climate deal in 2015. Nationalising the fossil-fuel businesses of energy corporations in the EU could be one practical policy response. It would put both production costs, emissions, and revenues under direct government control and thus help managing the energy transition, operationally and financially. In the same vein, the EU leaders should pose the question, what is the social contribution of large private banks in general and in the energy transition in particular?

Everything must change...

The energy transition is not like the "structural change" and transitions that we have experienced before. As Daniela Gabor put it, it has the potential to put "governments, through fiscal policy (taxing and spending), back in the driving seat". Energy transition implies sustained public investments in infrastructure, technology, and the welfare state to secure social stability. This is essential for such a large-scale and unprecedented socioeconomic transformation. European institutions and governments will need to switch from the current debt-to-GDP oriented budget constraints to mission-oriented budgeting grounded in new ideas such as Modern Monetary Theory and that makes for an active and bold government role. The climate crisis cannot be approached with obsolete and shy policy instruments that characterised the unfortunate neoliberal period.

Implementing all these policies will not be an easy task. Many unknowns and complexities lie ahead and hinder correct prediction. Policies will have to be revised and adapted in the process of learning and social discourse. What is the alternative for the EU? Let European Central Bank raise interest rates until the next recession brings down the oil price to 30 US dollars a barrel and then start talking again about energy transition?[2]

[1] For example, in the period 1 June to 1 July 2022, the US natural gas futures fell 34 per cent while Natural Gas EU Dutch TTF rose by 73 per cent.

[2] A naive disclaimer is due: I do not claim that there is a capable government just waiting for the „green light“ to jump in the front set and drive society in the right direction. I only hope there will be a critical mass of competent public leaders and administrators to take on these challenges.



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