

high energy prices are effective, but hurt the poorer part of the population

Mainz, January 28, 2025 | Dieter Wermuth

Germany's policy of [high energy prices has significantly contributed to the reduction of CO₂ emissions](#) and the improvement of the environment. Even so, it is still a long road toward climate neutrality – on a per capita basis, emissions remain above the global average. This is why the prices for natural gas, electricity and gasoline have to rise further. There are other instruments that could be used to reduce emissions, but the price mechanism is probably the most effective one.

The problem is that the reliance on higher energy prices will make the income distribution – which is already quite uneven – even more so. Poor households are affected more than rich households. In relative terms they are spending more than twice as much on energy than the better-off.

how rising energy prices change Germany's income distribution

model calculation^{)}*

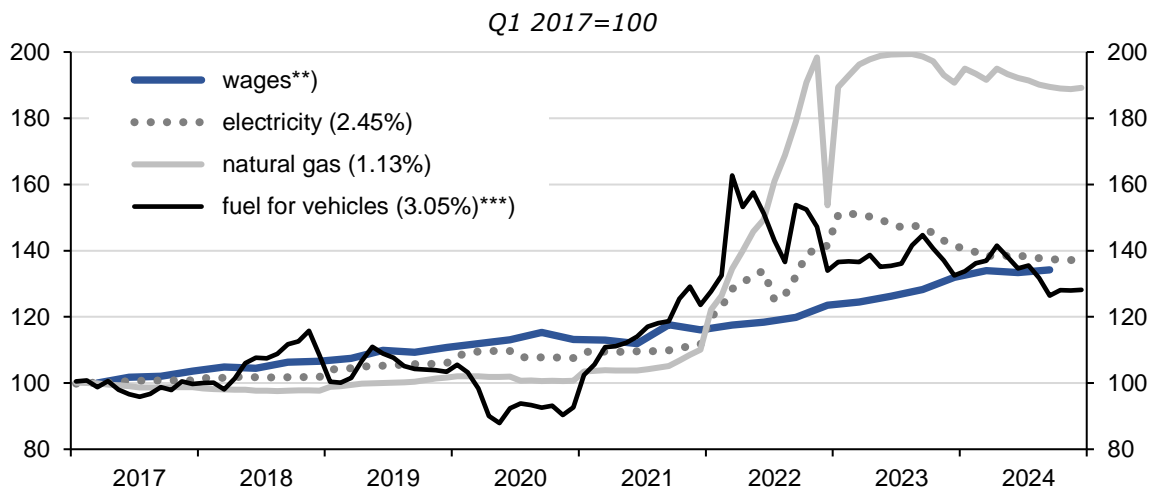
quartiles - household net income	<25%	25% to <50%	50% to <75%	75% to 100%
average net income per year and household, €	17,000	31,800	54,600	91,200
of which for energy, %	10.5	7.8	6.4	4.6
spending on energy, €	1,785	2,480	3,494	4,195
remaining income after spending on energy, €	15,215	29,320	51,106	87,005
energy prices rise by 50%	14,323	28,079	49,358	84,907
energy prices rise by 100%	13,430	26,839	47,611	82,810

^{*)} own calculations based on data of the continuous household budget surveys (LWR) of the Statistisches Bundesamt

In my model, which is probably close to reality, the households in the upper quartile of the income distribution earn on average 5.4 times as much as those in the bottom quartile – after adjusting for spending on energy, they make 5.7 times as much. Under the assumption that the volume of demand for energy will not change if its prices rise a lot, the ratio increases further: to 5.9 times after a 50% energy price inflation between now and then, and to 6.2 times if prices go up by 100%. Household incomes in the lower quartile would approach subsistence levels. For society, this would be a catastrophe. To avoid such an outcome, counter measures are needed.

For almost two years, from early 2021 to the end of 2022, prices for natural gas, gasoline and electricity had almost exploded. The situation has normalized since, but today's price levels remain a lot higher than before 2021

nominal wages and household energy prices^{*)}



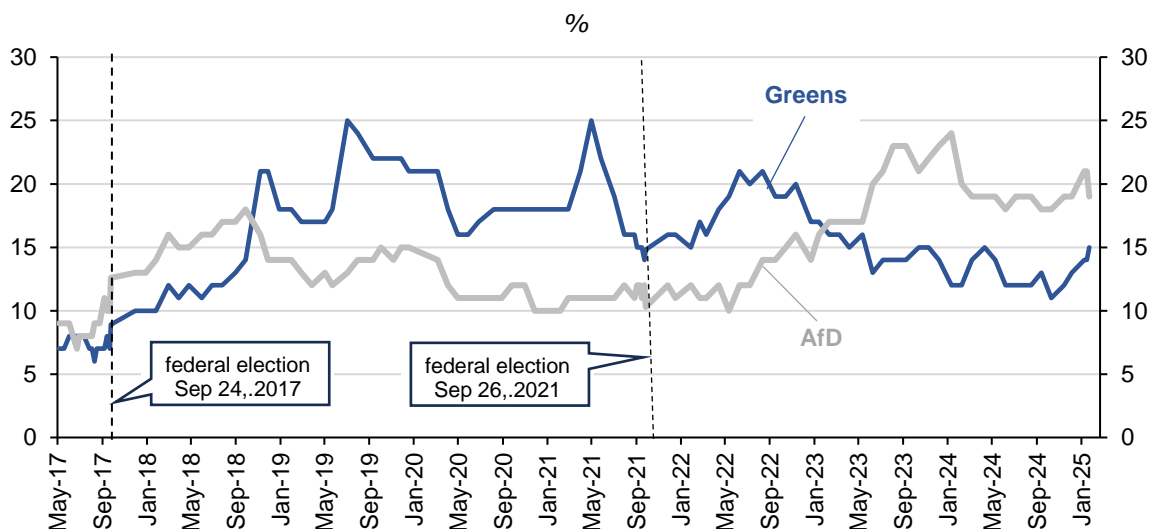
^{*)} weights in consumer price index in brackets – ^{**)} gross wages and salaries per hour worked
^{***)} supergrade petrol, diesel fuel, gas for cars

source: Stat. Bundesamt, own calculations; design & research: Uwe Richter

©UR

Not surprisingly, the poorer households suffered most. As a result of those high energy prices, their post-energy income had shrunk significantly, and they have mostly blamed the Greens, members of the three-party coalition government which has been in charge of federal policies since late 2021. Many have defected to the anti-immigration xenophobic AfD, the so-called Alternative for Germany. The Greens were clearly taken by surprise. The AfD doesn't care much, or not at all, about climate policies (like, incidentally, the supporters of Donald Trump).

opinion surveys for German federal elections^{*)} results for the Greens and the far-right AfD^{**)}



^{*)} Online-Panel – internet-based voting intention survey – ^{**)} Alternative for Germany

source: YouGov; own compilation, design & research: Uwe Richter

©UR

It is very difficult these days to sell climate policies without an effective social component. In economic theory, the easiest solution would be to redistribute all further government

revenues from energy taxes and fees back to the population, preferably on a per-capita basis. This would be the so-called climate bonus. The regressive effects of energy taxes would be compensated, perhaps even more than that, by the progressive effects of such a redistribution. Beneficiaries would be people who don't drive a car, or live in a care institution, or large families.

But this is not the only feasible solution to the negative social side effects of rising energy prices. In our well-developed social system, there are lots of suitable instruments which could be deployed without delay to provide social justice. People must see that climate policies are not just a financial burden but that there is a compensation in the form of social transfers to their household budgets. Poor people in particular could be the beneficiaries. This has to be clearly communicated. I hope it is not yet too late.

###